

1/35

APPROVED	O.G. FIG.
	CLASS/SUBCLASS
BY	DRAFTSMAN

1 CCGCCC TCCC CCGGCCGAGC TCCAGGGCTG CCGCCTAGCA GCTCCCGGCG
 51 GGAGAGCGGT TCAGAGCTCG CTCCCACCCC TTCCCGGCGT GATTGATCCG
 101 TCACGGGCGC CTCCGCTGCC GCCGCCGCCG CCGCGGCCGT TCTGAGCCGA
 151 GCCGGAACCC TAGCCCGAGA CGGAGCCGGG GCCCGGGCCG GCGCCATTGC
 201 GCGGGCGCCG CGGGAAGACC TTGGCGCGGG GCGGCGGGCC GGGCCAGGCC
 251 ATGCGGGCCG AGTGAGCCGG CGCCCGCAGC CCGCGGCGCG GCATGGCTTC
 301 CCCGCGGAGC TCCGGGCAGC CCGGGCCGCC GCCGCCGCCG CCACCGCCGC
 351 CCGCGCGCCT GCTACTGCTA CTGCTGCTGC CGCTGCTGCT GCCTCTGGCG
 401 CCCGGGGCCT GGGGCTGGGC GCGGGGCGCC CCCCGGCCGC CGCCAGCAG
 451 CCCGCCGCTC TCCATCATGG GCCTCATGCC GCTCACCAAG GAGGTGGCCA
 501 AGGGCAGCAT CGGGCGCGGT GTGCTCCCCG CCGTGGAACT GGCCATCGAG
 551 CAGATCCGCA ACGAGTCACT CCTGCGCCCC TACTTCCTCG ACCTGCGGCT
 601 CTATGACACG GAGTGCACAA ACGCAAAAGG GTTGAAAGCC TTCTACGATG
 651 CAATAAAATA CGGGCCGAAC CACTTGATGG TGTGTTGGAGG CGTCTGTCCA
 701 TCCGTACACAT CCATCATTGC AGAGTCCCTC CAAGGCTGGA ATCTGGTGCA
 751 GCTTTCTTTT GCTGCAACCA CGCCTGTTCT AGCCGATAAG AAAAAATACC
 801 CTTATTTCTT TCGGACCGTC CCATCAGACA ATGCGGTGAA TCCAGCCATT
 851 CTGAAGTTGC TCAAGCACTA CCAGTGGGAA CGCGTGGGCA CGCTGACGCA
 901 AGACGTTTCA AGGTTCTCTG AGGTGCGGAA TGACCTGACT GGAGTTCTGT
 951 ATGGCGAGGA CATTGAGATT TCAGACACCG AGAGCTTCTC CAACGATCCC
 1001 TGTACCAAGT TCAAAAAGCT GAAGGGGAAT GATGTGCGGA TCATCCTTGG
 1051 CCAGTTTGAC CAGAATATGG CAGCAAAAGT GTTCTGTTGT GCATACGAGG
 1101 AGAACATGTA TGGTAGTAAA TATCAGTGGA TCATTCCGGG CTGGTACGAG
 1151 CCTTCTTGGT GGGAGCAGGT GCACACGGAA GCCAACTCAT CCCGCTGCCT
 1201 CCGGAAGAAT CTGCTTGCTG CCATGGAGGG CTACATTGGC GTGGATTTCG
 1251 AGCCCCCTGAG CTCCAAGCAG ATCAAGACCA TCTCAGGAAA GACTCCACAG
 1301 CAGTATGAGA GAGAGTACAA CAACAAGCGG TCAGGCGTGG GGCCAGCAA
 1351 GTTCCACGGG TACGCCTACG ATGGCATCTG GGTTCATCGC AAGACACTGC
 1401 AGAGGGCCAT GGAGACACTG CATGCCAGCA GCCGGCACCA GCGGATCCAG
 1451 GACTTCAACT ACACGGACCA CACGCTGGGC AGGATCATCC TCAATGCCAT
 1501 GAACGAGACC AACTTCTTCG GGGTCACGGG TCAAGTTGTA TTCCGGAATG
 1551 GGGAGAGAAT GGGGACCATT AAATTTACTC AATTTCAAGA CAGCAGGGAG
 1601 GTGAAGGTGG GAGAGTACAA CGCTGTGGCC GACACACTGG AGATCATCAA
 1651 TGACACCATC AGGTTCCAAG GATCCGAACC ACCAAAAGAC AAGACCATCA
 1701 TCCTGGAGCA GCTGCGGAAG ATCTCCCTAC CTCTCTACAG CATCCTCTCT
 1751 GCCCTACCA TCCTCGGGAT GATCATGGCC AGTGCTTTTC TCTTCTTCAA
 1801 CATCAAGAAC CGGAATCAGA AGCTCATAAA GATGTCGAGT CCATACATGA
 1851 ACAACCTTAT CATCCTTGGA GGGATGCTCT CCTATGCTTC CATATTTCTC
 1901 TTTGGCCTTG ATGGATCCTT TGTCTCTGAA AAGACCTTTG AAACACTTTG
 1951 CACCGTCAGG ACCTGGATTG TCACCGTGGG CTACACGACC GCTTTTGGGG
 2001 CCATGTTTGC AAAGACCTGG AGAGTCCACG CCATCTTCAA AAATGTGAAA
 2051 ATGAAGAAGA AGATCATCAA GGACCAGAAA CTGCTTGTGA TCGTGGGGGG
 2101 CATGCTGCTG ATCGACCTGT GTATCCTGAT CTGCTGGCAG GCTGTGGACC
 2151 CCCTGCGAAG GACAGTGGAG AAGTACAGCA TGGAGCCGGA CCCAGCAGGA

FIG. 1A

2/35

APPROVED	O.G. FIG.
	CLASS/SUBCLASS
BY	DRAFTSMAN

2201 CGGGATATCT CCATCCGCC TCTCCTGGAG CACTGTGAGA ACACCCATAT
 2251 GACCATCTGG CTTGGCATCG TCTATGCCTA CAAGGGACTT CTCATGTTGT
 2301 TCGGTTGTTT CTTAGCTTGG GAGACCCGCA ACGTCAGCAT CCCC GCACTC
 2351 AACGACAGCA AGTACATCGG GATGAGTGTC TACAACGTGG GGATCATGTG
 2401 CATCATCGGG GCCGCTGTCT CTTTCCTGAC CCGGGACCAG CCCAATGTGC
 2451 AGTTCTGCAT CGTGGCTCTG GTCATCATCT TCTGCAGCAC CATCACCTC
 2501 TGCCTGGTAT TCGTGCCGAA GCTCATCACC CTGAGAACAA ACCCAGATGC
 2551 AGCAACGCAG AACAGGCGAT TCCAGTTCAC TCAGAATCAG AAGAAAGAAG
 2601 ATTCTAAAC GTCCACCTCG GTCACCAGTG TGAACCAAGC CAGCACATCC
 2651 CGCCTGGAGG GCCTACAGTC AGAAAACCAT CGCCTGCGAA TGAAGATCAC
 2701 AGAGCTGGAT AAAGACTTGG AAGAGGTCAC CATGCAGCTG CAGGACACAC
 2751 CAGAAAAGAC CACCTACATT AAACAGAACC ACTACCAAGA GCTCAATGAC
 2801 ATCCTCAACC TGGGAAACTT CACTGAGAGC ACAGATGGAG GAAAGGCCAT
 2851 TTTAAAAAAT CACCTCGATC AAAATCCCCA GCTACAGTGG AACACAACAG
 2901 AGCCCTCTCG AACATGCAAA GATCCTATAG AAGATATAAA CTCTCCAGAA
 2951 CACATCCAGC GTCGGCTGTC CCTCCAGCTC CCCATCCTCC ACCACGCCTA
 3001 CCTCCCATCC ATCGGAGGCG TGGACGCCAG CTGTGTCAGC CCCTGCGTCA
 3051 GCCCCACCGC CAGCCCCCGC CACAGACATG TGCCACCCTC CTTCCGAGTC
 3101 ATGGTCTCGG GCCTGTAAGG GTGGGGGGCC TGGGCCCGGG GCCTCCCCCG
 3151 TGACAGAACC ACACTGGGCA GAGGGGTCTG CTGCAGAAAC ACTGTGCGCT
 3201 CTGGCTGCGG AGAAGCTGGG CACCATGGCT GGCCTCTCAG GACCACTCGG
 3251 ATGGCACTCA GGTGGACAGG ACGGGGCAGG GGGAGACTTG GCACCTGACC
 3301 TCGAGCCTTA TTTGTGAAGT CTTATTTCT TCACAAAGAA GAGGAACGGA
 3351 AATGGGACGT CTTCTTAAC ATCTGCAAAC AAGGAGGCGC TGGGATATCR
 3401 AATTCCACCA CACTGGCGGC CCGCGCTTGS TCSTAATCAT GGTCAATACT
 3451 GTTTCCTGTG TTGAAATTGT TATCCGCTCC

FIG.1B

APPROVED BY	O.G. FIG.
	CLASS/SUBCLASS
DRAFTSMAN	

1 MASPRSSGQP GPPPPPPPPP ARLLLLLLLP LLLPLAPGAW GWARGAPRPP
 51 PSSPPLSIMG LMPLTKEVAK GSIGRGVLPA VELAIEQIRN ESLLRPYFLD
 101 LRLYDTECDN AKGLKAFYDA IKYGNHLMV FGGVCPSVTS IIAESLQGWN
 151 LVQLSFAATT PVLADKKKYP YFFRTVPSDN AVNPAILKLL KHYQWKRVTG
 201 LTQDVQRFSE VRNDLTGVLY GEDIEISDTE SFSNDPCTSV KKLKGN DVRI
 251 ILGQFDQNMA AKVFCCAYEE NMYGSKYQWI IPGWYEPSWW EQVHTEANSS
 301 RCLRKNLLAA MEGYIGVDFE PLSSKQIKTI SGKTPQQYER EYNNKRSGVG
 351 PSKFHGYAYD GIWVIAKTLQ RAMETLHASS RHQRIQDFNY TDHTLGRIL
 401 NAMNETNFFG VTGQVFRNG ERMGTIKFTQ FQDSREVKVG EYNAVADTLE
 451 IINDTIRFQG SEPPKDKTII LEQLRKISLP LYSILSALT I LGMIMASAFL
 501 FFNIKRNQK LIKMSSPYMN NLIILGGMLS YASIFLFLD GSFVSEKTFE
 551 TLCTVRTWIL TVGYTTAFGA MFAKTWRVHA IFKNVKMKKK I IKDQKLLVI
 601 VGGMLLIDLC ILICWQAVDP LRRTVEKYSM EPDPAGRDIS IRPLLEHCEN
 651 THMTIWL GIV YAYKGLMLF GCFLAWETRN VSIPALNSDK YIGMSVYNVG
 701 IMCIIGA AVS FLTRDQPNVQ FCIVALVIIF CSTITLCLVF VPKLITLRTN
 751 PDAATQNR RF QFTQNQKKED SKTSTSVTSV NQASTSRLEG LQSENHRLRM
 801 KITELDKDLE EVTMQLQDTP EKTYYIKQNH YQELNDILNL GNFTSTDDGG
 851 KAILKNHLDQ NPQLQWNTTE PSRTCKDPIE DINSPEHIQR RLSLQLPILH
 901 HAYLPSIGGV DASCVSPCVS PTASPRHRHV PPSFRVMVSG L

FIG.2

4/35

APPROVED BY DRAFTSMAN	O.G. FIG.	CLASS SUBCLASS

Sequence: LPLLLPLAPGAWG-WARGAPRPPSSPPLSIMGLMPLTKEVAKGSIGRGVLPAVELAIEQIRNE
 |(signal) |(mature peptide)
 29 42

Other entries above 3.50

Score 11.1 at residue 39

Sequence: LLLLPLLLPLAPG-AWGWARGAPRPPSSPPLSIMGLMPLTKEVAKGSIGRGVLPAVELAIEQI
 |(signal) |(mature peptide)
 26 39

Score 8.6 at residue 38

Sequence: LLLLLPLLLPLAP-GAWGWARGAPRPPSSPPLSIMGLMPLTKEVAKGSIGRGVLPAVELAIEQ
 |(signal) |(mature peptide)
 25 38

Score 8.1 at residue 35

Sequence: RLILLLLPLLLP-LAPGAWGWARGAPRPPSSPPLSIMGLMPLTKEVAKGSIGRGVLPAVELA
 |(signal) |(mature peptide)
 22 35

Score 7.9 at residue 36

Sequence: LILLLLPLLLPL-APGAWGWARGAPRPPSSPPLSIMGLMPLTKEVAKGSIGRGVLPAVELAI
 |(signal) |(mature peptide)
 23 36

Score 6.2 at residue 9

Sequence: -QPGRPPPPPPPARLILLLLPLLLPLAPGAWGWARGAPRPPSSPPLSI
 |(signal) |(mature peptide)
 -4 9

Score 5.7 at residue 46

Sequence: LPLAPGAWGWARG-APRPPSSPPLSIMGLMPLTKEVAKGSIGRGVLPAVELAIEQIRNESLLR
 |(signal) |(mature peptide)
 33 46

Score 5.6 at residue 747

Sequence: ITLCLVFVVKLIT-LRTNPDAATQNRRFQFTQNQKKEDSKTSTSVTSVNQASTSRLEGLOSENH
 |(signal) |(mature peptide)
 734 747

Score 5.0 at residue 44

Sequence LLLPLAPGAWGWA-RGAPRPPSSPPLSIMGLMPLTKEVAKGSIGRGVLPAVELAIEQIRNESL
 |(signal) |(mature peptide)
 31 44

Score 4.9 at residue 497

FIG.3A

APPROVED	O.G. FIG.	CLASS SUBCLASS
	BY	
		DRAFTSMAN

Sequence: ILSALTILGMIMA-SAFLFFNIKNRNQKLIKMSPPMNNLIILGGMLSYASIFLFGLDGSFVSE
 |(signal) |(mature peptide)
 484 497
 Score 4.5 at residue 141

Sequence: LMVFGGVCPSVTS-IIAESLQGWNLVQLSFAATTPVLADKKKYPYFFRTVPSDNAVNPAILKLL
 |(signal) |(mature peptide)
 128 141
 Score 4.4 at residue 734

Sequence: FCIVALVIIFCST-ITLCLVFVPKLITLRTNPDAATQNRRFQFTQNQKKEDSKTSTSVTSVNQA
 |(signal) |(mature peptide)
 721 734
 Score 4.1 at residue 165

Sequence: VQLSFAATTPVLA-DKKKYPYFFRTVPSDNAVNPAILKLLKHYQWKRVGTLTQDVQRFSEVRND
 |(signal) |(mature peptide)
 152 165
 Score 3.6 at residue 158

Sequence: SLQGWNLVQLSFA-ATTPVLADKKKYPYFFRTVPSDNAVNPAILKLLKHYQWKRVGTLTQDVQR
 |(signal) |(mature peptide)
 145 158

FIG.3B

APPROVED	O.G. FIG.
BY	CLASS/SUBCLASS
DRAFTSMAN	

Distribution of mRNA for EST z43654 in squirrel monkey brain.

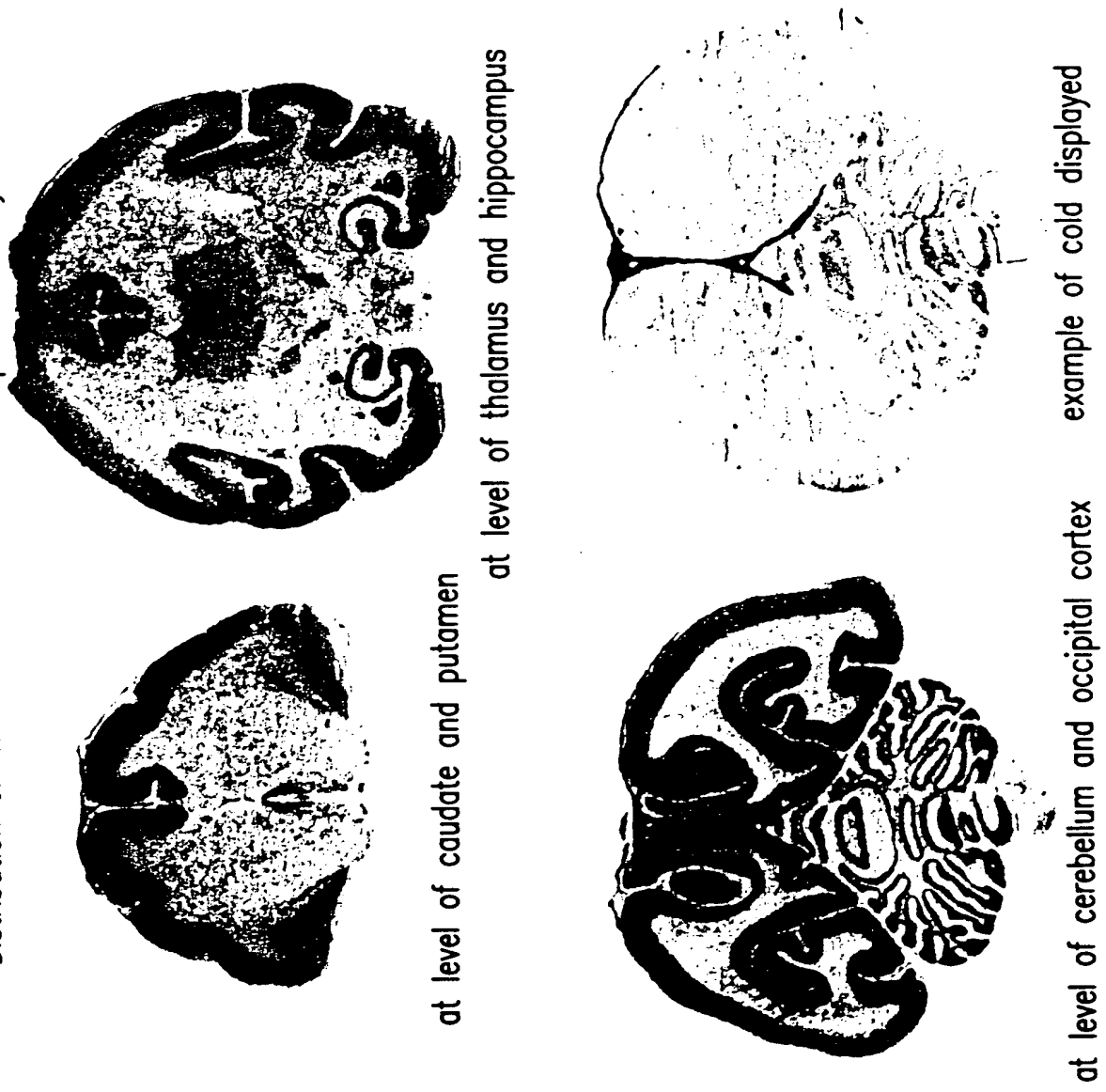
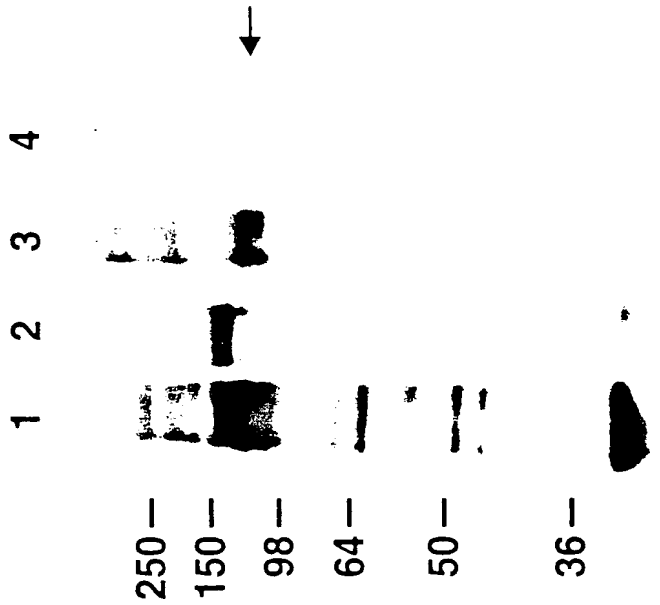


FIG.4

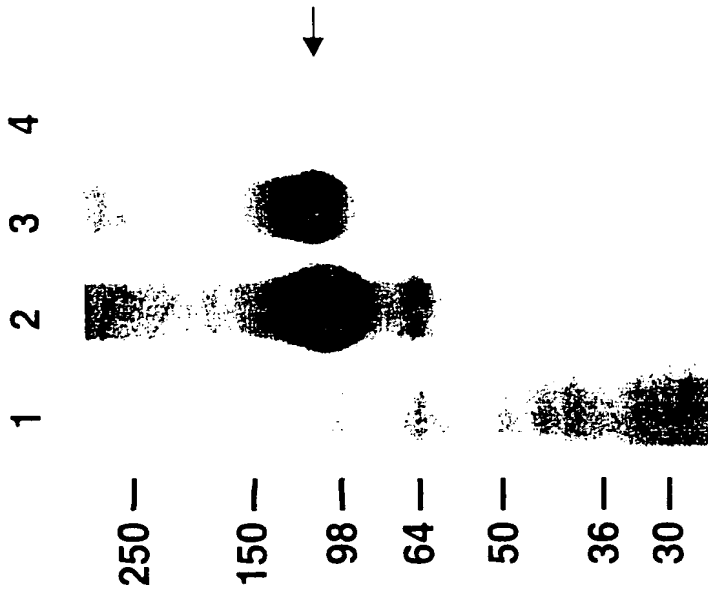
APPROVED	O.G. FIG.
BY	CLASS SUBCLASS
DRAFTSMAN	



COS-7 Melanophores

- 1- FLAG-HG20/pcDNA 3.1
2- pcDNA 3.1
3- FLAG-HG20/pcDNA 3.1
4- pcDNA 3.1

FIG. 5B



- 1- HG20/PCR 3:1
- 2- FLAG-HG20/pcDNA 3:1
- 3- Mouse GABA_B/ pcDNA 3:1
- 4- pcDNA 3:1

FIG. 5A

8/35

APPROVED BY DRAFTSMAN	O.G. FIG.	CLASS/SUBCLASS

PLTKEVAK-GSIGR-GVLPVELAIEQIRNESLLRPYFLDLRLYDTECDNAKGLKAFYDA
XX
 PVTGPVAQYGDMQRAGAL----MAIEQINKAGGVNGAQLGVIYDDACDPKQAVAVANKV

IKYGPNHLMVFGGVCPSVTIIAESLQGWNLVQLSFAATTPVLADKKKYPYFFRTVPSDN

 VNDGVK--FVVGHVCCSSTQPATDIYEDEGLMITPSATAPEIT-SRGYKLIFRTIGLDN

AVNPAILKLL-KHYQWKRVTGLTQDVQRFSE-VRNDLTGVLYGEDIEISDTESFS---ND

 MQGPVAGKFIAERYKVKTIAVL-HDKQQYGEIATEVKKTVEDAGIRVAVFEGLNAGDKD

PCTSVKKLKGNDVRII-LGQFDQNM

 FNALISKLLKAGVQFVYFGGYHPEM

FIG.6

9/35

APPROVED	O.G. FIG.	CLASS	SUBCLASS
BY			
DRAFTSMAN			

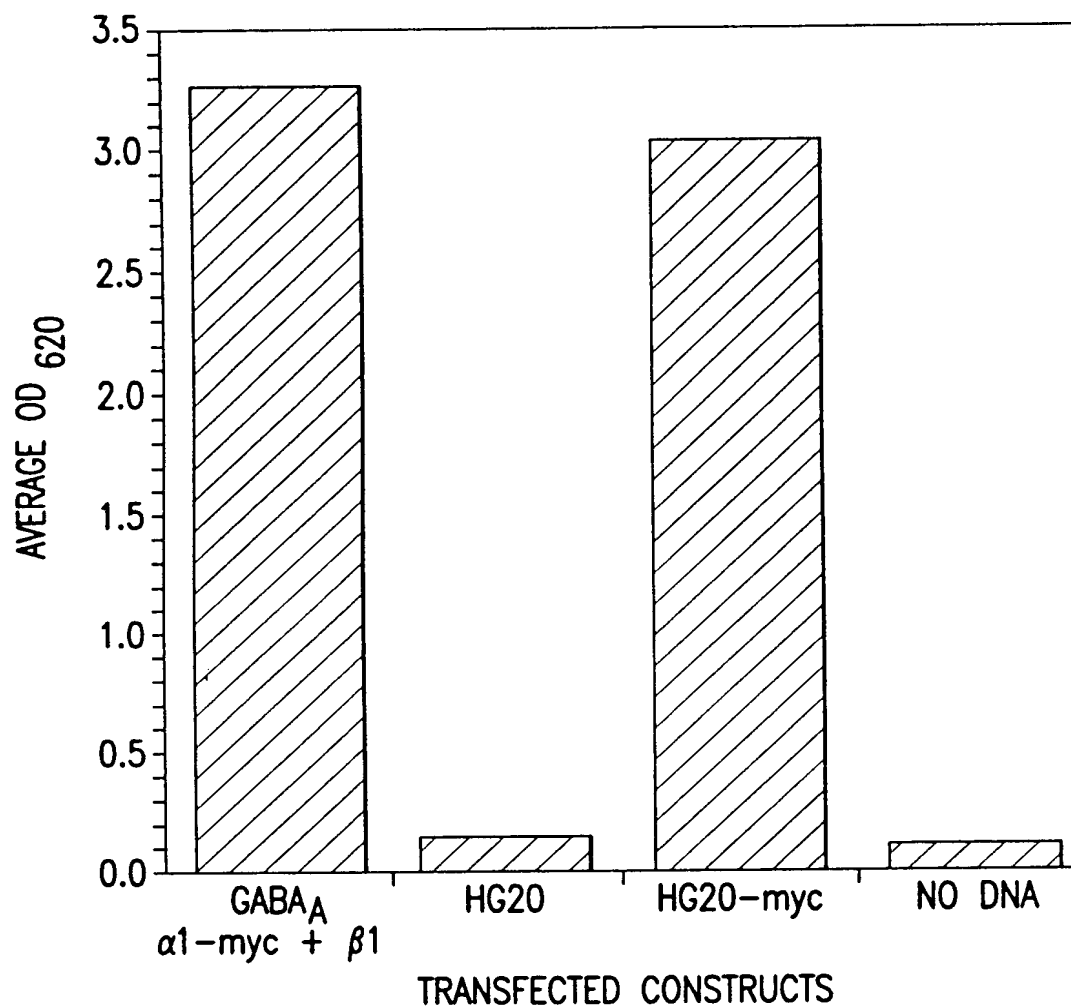


FIG.7

APPROVED	O.G. FIG.
BY	CLASS/SUBCLASS
DRAFTSMAN	

GABA-BR1b
 HG20
 Consensus
 69
 75
 75
 143
 149
 150
 218
 224
 225
 290
 299
 300
 365
 372
 375
 440
 446
 450
 512
 519
 525

MGPGGCTPVGWPLPLLLVMAAGVAPVWASHPHL---PRPHPRVPPHPSSERRAVYIGALFPMSSGGWP-G--GQ
 MASPRSSGQGRPPPPPPARILLLLPLPLAPGAWGARGAPRPPSPPLSIMGLMPLTKEVAKGSIGR
 M.....G.P.P.....A.....L.....R.P.P.....I.L.P.....G.G.
 Consensus
 ACQPAVEMALEDVNSRRDILPDYELKLIHDSKCDPGQATKLYLLENDPIKILMPG-CSSVSTLVAEARMW
 GVLPAVELAIEQIRN-ESLLRPYFLDLRLYDTECONAKGLKAFDAIKYGNHLMVFGVGCPSVTSIIAESLQGW
 ...PAVE.A.E.....L.Y.L.L...D.CD.....K.Y.....P.....G.C.SV....AE....W
 Consensus
 NLIVLSYGSSSPALSNRQRFPTFRTHPSATLHNPTRVKLFKLGWKKIATIQQTTEVFTSTLDDLEERVKEAGI
 NLVQLSFAATTPVLADKKKYPYFFRTVPSONAVNPAILKLLKHYQWKRVTGLTQDVQRFSEVRNDLTGVLYGEDI
 NL..LS.....P.L.....P.FFRT.PS....NP..KL.....WK...T.Q....F.....DL.....I
 Consensus
 EITFRQSFSDPAVPVKNLKRQDARIIVGLFYETEARKVFCEVYKERLFGKKYVWFLIGWADNWF---KTYDPS
 EISDTEFSNDPCTSVKCLKGNDVRIILGQFDQNMMAKVCCAYEENMYGSKYQWIIIPGWEPSEWQVHTEANS
 EI.....SF..DP...VK.LK...D.RII.G.F...A.KVFC..Y.E...G.KY.W...GWY...W.....T....S
 Consensus
 INCTVEEMTEAVEGHIITTEIVMLNPANTRISNMTSQEFVEKLTKRLKRHPETGGFQEAPLAYDAIWAALALN
 SRCLRNLLAAMEGYIGVDFEPLSSKQIKTISGKTPQY-EREYNN-KRSGVGPSKFHGYAYDGIWIAKTLQRA
 ...C.....A.EG.I.....L.....IS.T.Q...E.....F.....A.L....
 Consensus
 KTSGGGRSGVRLEDFNYYNQTITDQIYRAMNSSFEVSGHVWFDASGSRMAWTLIEQLQGSYKKIGYYDSTK
 METLHASSRHRIQDFNYDHTLGRILNAMNETNFFGVGTQVVR-NGERMGTIKFTQFQDSREVKVGEYNAVA
R..DFNY...T...I.....AMN..F.GV.G.VVF...G.RM.....Q.Q.....K.G.Y.....
 Consensus
 DDLSWSKTDKWIGGSPADQTLVIKTRFLSQKLFISVSVLSSGLIVLAVVC---LSFNIYNSHVRYIQNSQPNL
 DTLEIINDTIRFQSGEPPKDTII--LEQLRKISLPLYSILSALTILGMIMASAFNFKRNQKLKIMSSPYM
 D.L.....GS.P.....I.....L.....S.L.S.L.I.....L.FNI.N.....I..S.P...
 Consensus

FIG.8A

U.S. GOVERNMENT PRINTING OFFICE: 1975 O - 375-709

APPROVED	O.G. FIG.
BY	CLASS/SUBCLASS
DRAFTSMAN	

09/601582

11/35

GABA-BR1b	NNLTAVGCSLAAVFLPLGLDGYHIGRSQFPFVCQARLWLLGLFSLGYGSMFTKIWWVHTVFTKKEEKKWRKT	587
HG20	NNLITILGMLSYASIFLGLDGSFVSEKTFETLCTVRTWILTVGYTTAFGAMFAKTWRVHAIF--KNVKMK-KKI	591
Consensus	NNL...G...L...A...F...GLDG.....F...C...R...W...L...G.....G...MF...K...W...VH...F...K...K...K.....K.	600
GABA-BR1b	LEPWKL YATVGLLVGMDVLT LAIWQIVDPLHRTIETFAKEEPKEDIDVSI LPQLEHCSSKKMNTWLGI FYGYKGL	662
HG20	IKDQKLLVIVGGMLLIDLCILICQAVDPLRRTVEKYSMEPDAGRDISIRPLLEHCENTHMTIWLGI VYAYKGL	666
Consensus	...KL...VG.....D...L...WQ...VDPL...RT...E.....D...SI...P...LEHC.....M...WLG...I...Y...YKGL	675
GABA-BR1b	LLLLGIFLAYETKSVSTEKINDHRAVGMAIYNVAVLCLITAPVTMILSSQDDAAFAFASLAIVFSSYITLWLVFV	737
HG20	LMLFGCFLAWETRNVSI PALNDSKYIGMSVYVNGIMCIIGAASVFLTRDQPNVQFCIVALVIIFCSTITLCLFV	741
Consensus	L...L...G...FLA...ET...VS...ND...GM...YNV...C...I...A...V.....Q.....F...L...I...F...S...ITL...FV	750
GABA-BR1b	PKMRLITRGE-----W-----QSETQDTMTKGSS-TNNNEEKSRLL--LEKE-----NRELEKI----	784
HG20	PKLITLRTNPDAATQNRFFQFTQNQKEDSKTSTSVTSVNOASTSRLEGLOSENHRLRMKITELDKDLEEVTMQL	816
Consensus	PK...L...T.....Q.....KT...S...T...N....SRL...L...E.....LE.....	825
GABA-BR1b	--IAEKE-----ERVSE-----LRHQLQSRQQLRSRRHPPTPP--DPSGG-----	820
HG20	QDTPEKTTYIKQNHYYQLNDILNLGNFTESDGGKAILKNHLDQNPQLQWNTTEPSRTCKDPIEDINSPEHIQRR	891
Consensus	...EK.....L...L...QL.....P.....DP.....	900
GABA-BR1b	-----LPR-GPSEPPORLSC-----DGSRVHLL----YK-----	844
HG20	LSLQLPILHHAYLPSIGGVDASCSPCVSPTASPRHRHVPPSFRVMVSGL	941
ConsensusLP...G.....C.....R.....	950

FIG.8B

Parameter	Unit	Value	Standard Error	95% CI	P-value
Intercept		1.00	0.00	1.00	0.00
Age	Years	0.02	0.01	-0.01, 0.05	0.15
Gender					
Male		0.05	0.03	-0.01, 0.11	0.08
Female		-0.02	0.03	-0.08, 0.04	0.45
Education	Years	0.01	0.01	-0.02, 0.04	0.32
Income	\$/hr	0.00	0.00	-0.01, 0.01	0.92
Occupation					
Managerial		0.03	0.02	-0.01, 0.07	0.12
Professional		0.01	0.02	-0.03, 0.05	0.78
Service		-0.01	0.02	-0.05, 0.03	0.65
Unemployed		0.02	0.03	-0.03, 0.07	0.42
Retired		0.01	0.02	-0.03, 0.05	0.71
Health Status					
Good		0.04	0.02	0.00, 0.08	0.01
Fair		0.01	0.02	-0.03, 0.05	0.68
Poor		-0.02	0.03	-0.08, 0.04	0.28
Marital Status					
Married		0.01	0.02	-0.03, 0.05	0.71
Single		0.02	0.03	-0.03, 0.07	0.42
Divorced		0.01	0.02	-0.03, 0.05	0.71
Widowed		0.01	0.02	-0.03, 0.05	0.71
Living Arrangement					
Alone		0.01	0.02	-0.03, 0.05	0.71
With Family		0.01	0.02	-0.03, 0.05	0.71
With Friends		0.01	0.02	-0.03, 0.05	0.71
Institution		0.01	0.02	-0.03, 0.05	0.71
Time of Day					
Morning		0.01	0.02	-0.03, 0.05	0.71
Afternoon		0.01	0.02	-0.03, 0.05	0.71
Evening		0.01	0.02	-0.03, 0.05	0.71
Season					
Spring		0.01	0.02	-0.03, 0.05	0.71
Summer		0.01	0.02	-0.03, 0.05	0.71
Autumn		0.01	0.02	-0.03, 0.05	0.71
Winter		0.01	0.02	-0.03, 0.05	0.71

FIG. 9

APPROVED	O.G. FIG.
BY	CLASS/SUBCLASS
DRAFTSMAN	

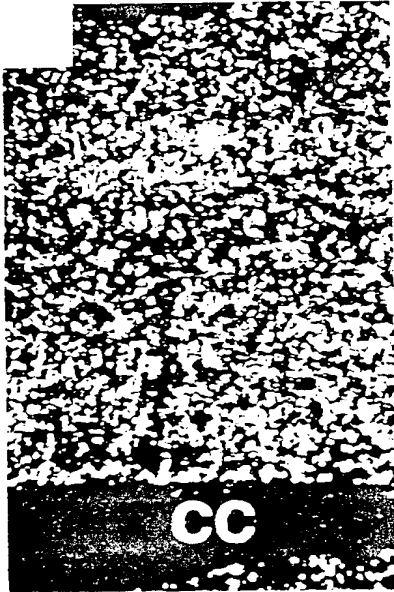


FIG.10A



FIG.10B

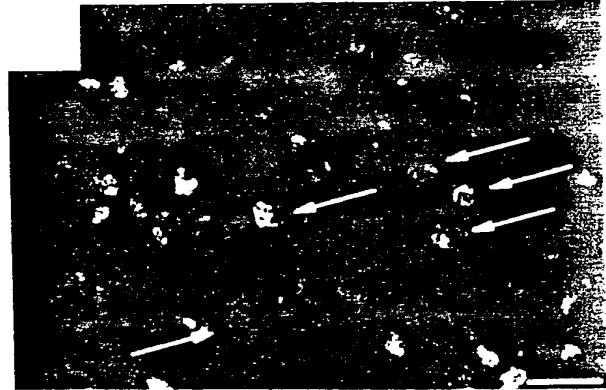


FIG.10C

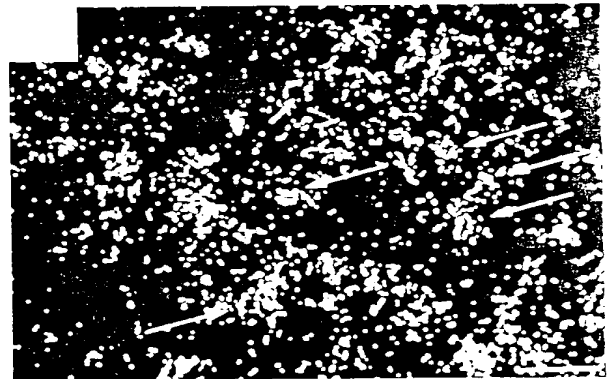


FIG.10D

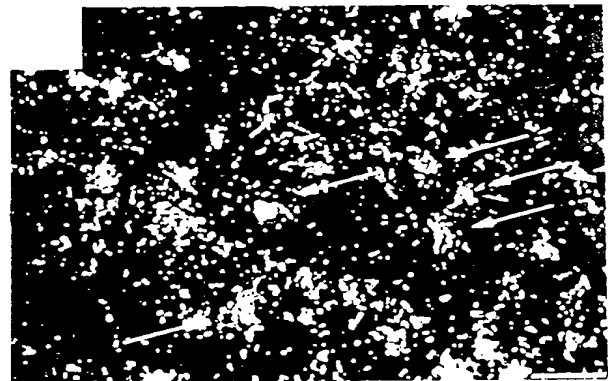


FIG.10E

004021 20570050

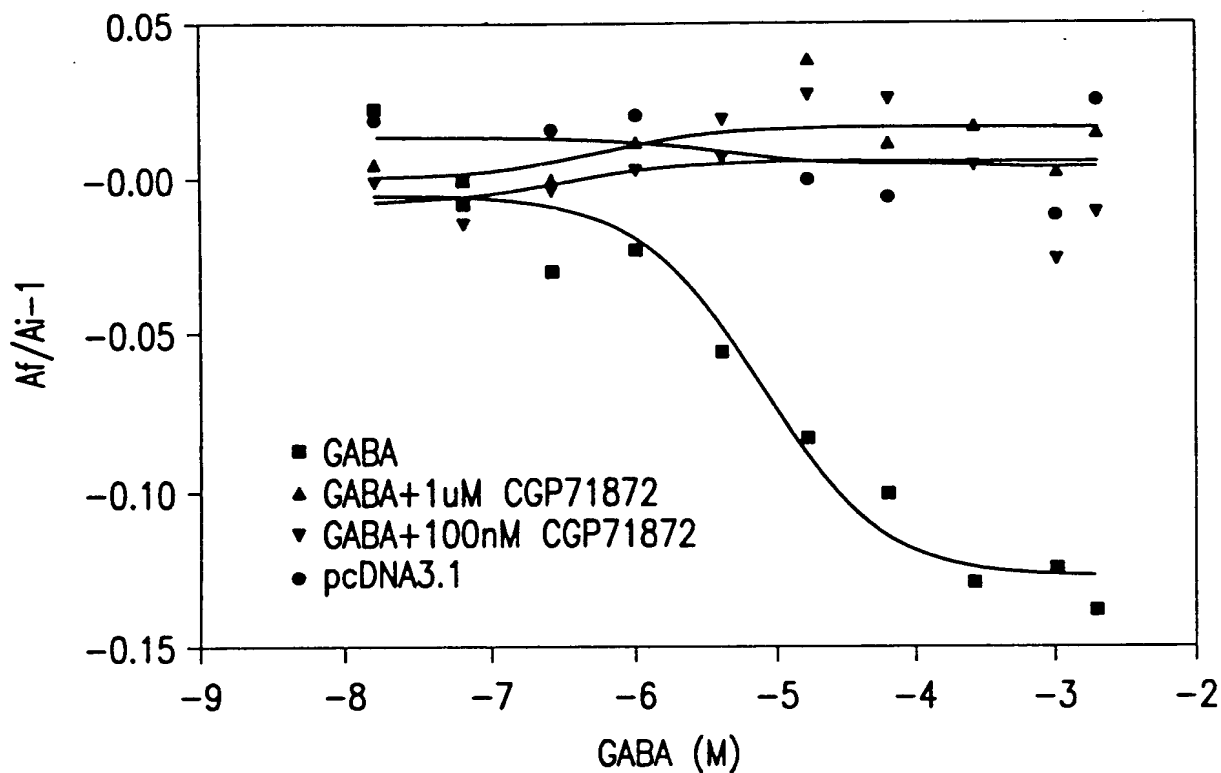


FIG. 11A

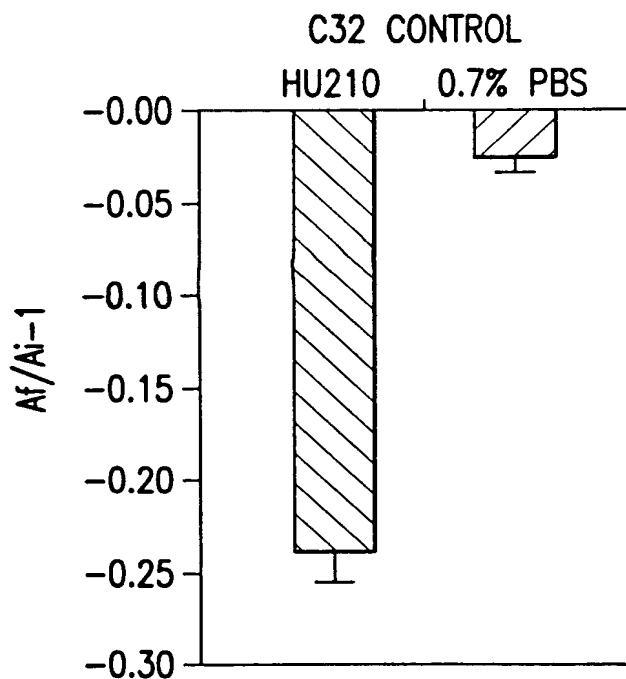


FIG. 11B

15/35

APPROVED	O.G. FIG.
BY	CLASS/SUBCLASS
DRAFTSMAN	

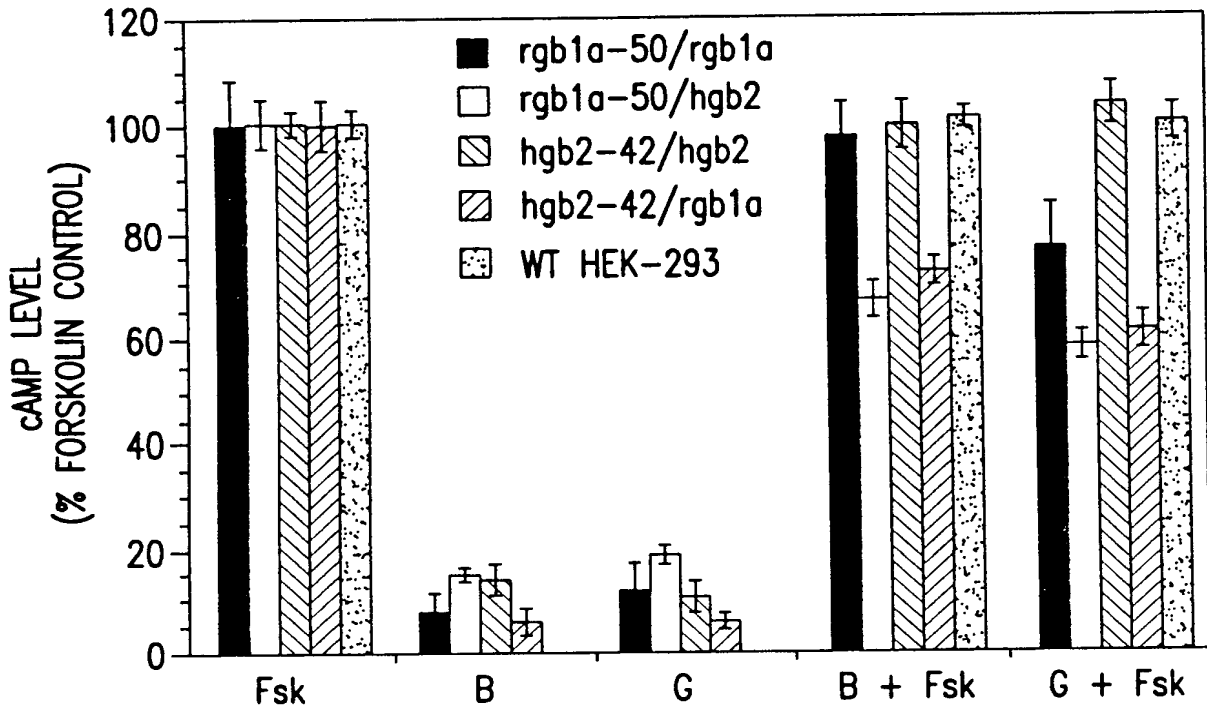


FIG. 12

APPROVED	O.G. FIG.	CLASS/SUBCLASS
	BY	
DRAFTSMAN		

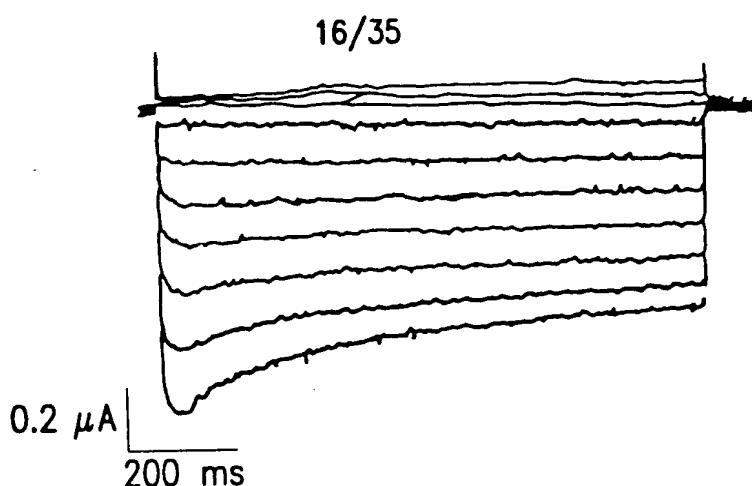


FIG. 13A

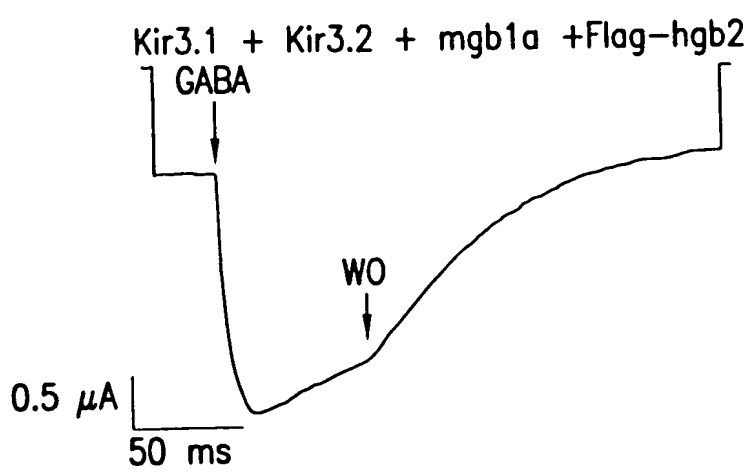
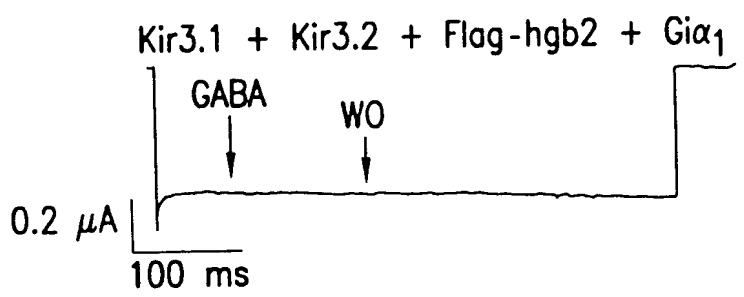
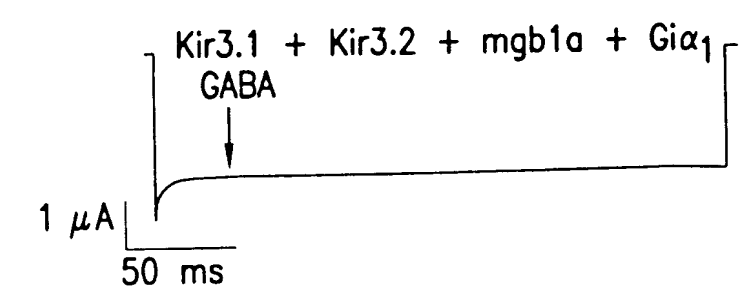


FIG. 13B

17/35

APPROVED BY DRAFTSMAN	O.G. FIG.
	CLASS/SUBCLASS

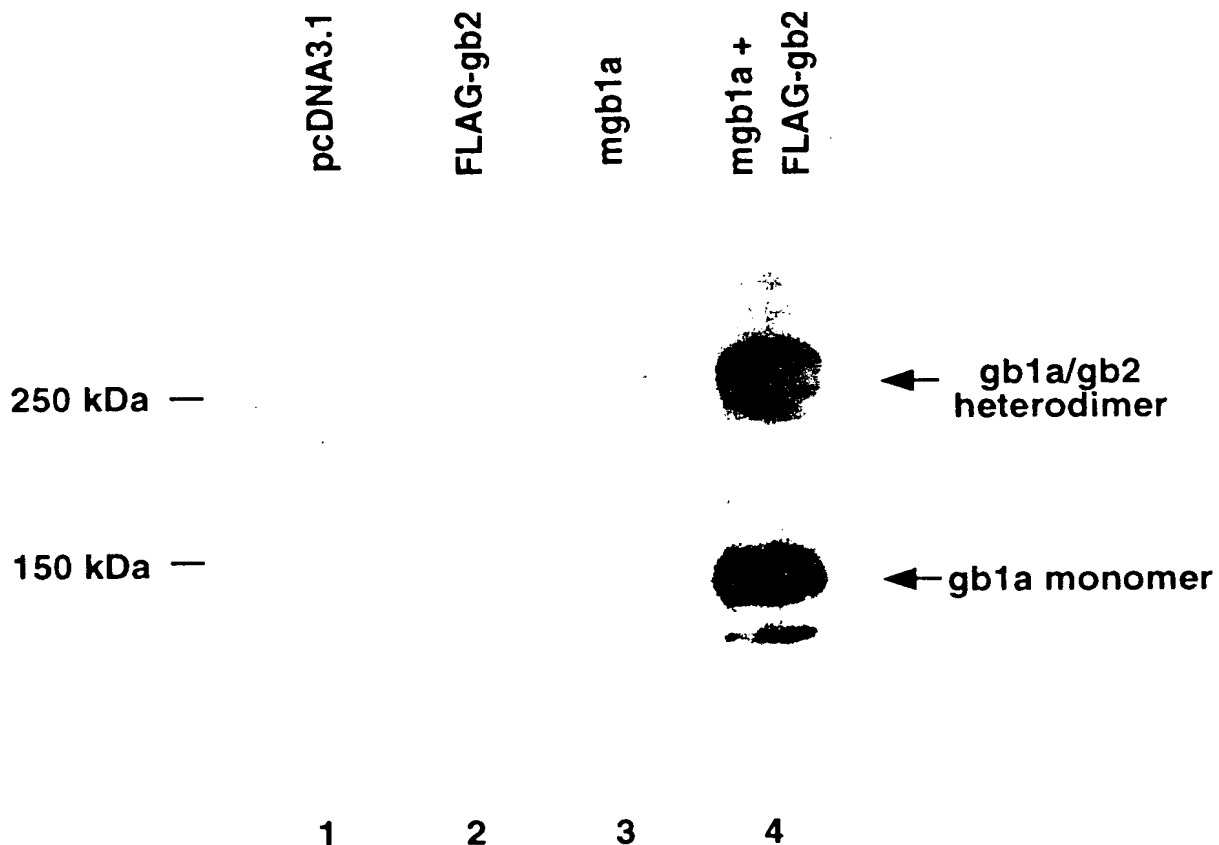


FIG.14

APPROVED	O.G. FIG.
	CLASS/SUBCLASS
BY	
DRAFTSMAN	

1 atgctgctgc tgctgcttct gcttctcttc ctccgcccc tgggcgctgg cggggctcag
 61 accccaacg tcacctcgga aggttgccag attatacatc cgccctggga aggtggcatc
 121 aggtaccgtg gcttgattcg cgaccaggtg aaggccatca atttctgcc tgtggactat
 181 gagattgaat atgtgtgccg gggcgaaacg gaggtggtgg ggccaaggt gcgcaagtgc
 241 ctggccaacg gctcctggac ggatatggac acaccagtc gctgtgtccg aatctgctcc
 301 aagtcttatt tgaccctgga aaatgggaag gttttcctga cgggtgggga cctcccagct
 361 ctggatggag cccgggtgga tttccgatgt gaccctgact tccatctggt gggcagctcc
 421 cggagcatct gtagtcaggg ccagtggagc accccaagc cccactgcca ggtgaatcga
 481 acgccacact cagaacggcg tgcagtatac atcggggcgc tgtttcccat gagcgggggc
 541 tggccggggg gccaggcctg ccagcctgcg gtggagatgg cgctggagga cgttaacagc
 601 cgcagagaca tcctgccgga ctacgagctc aagcttatcc accacgacag caagtgcgac
 661 ccagggcaag ccaccaagta cttgtatgaa ctactctaca acgaccccat caagatcatc
 721 ctcatgcccc gctgcagctc tgtgtccaca ctggtagccg aggtgcccc gatgtggaac
 781 cttattgtgc tctcatatgg ctccagctca ccagccttgt caaaccgaca gcggtttcca
 841 acgttctttc ggacacatcc atccgccaca ctccacaatc ccaccgggt gaaactcttc
 901 gaaaagtggg gctggaagaa gattgccacc atccagcaga ctaccgaggt cttcacctca
 961 aactggatg acctggagga gcgagtgaag gaggtgaggga ttgagatcac ttttcgacag
 1021 agtttcttct cagatccagc tgtgcctggt aaaaacctga agcgtcaaga tgctcgaatc
 1081 atcgtgggac ttttctatga gaccgaagcc cggaaagtgt tttgtgaggt ctataaggaa
 1141 cggctctttg ggaagaagta tgtctggttt ctcatcggtt ggtatgctga caactgggtc
 1201 aaaacctatg acccgtcaat caattgtaca gtagaagaga tgactgaggc ggtggagggc
 1261 catatcacca cggagattgt catgctgaac cctgccaaca cccgaagcat ttccaacatg
 1321 acatcacagg aatttgtgga gaaactaacc aagcggctga aaagacaccc tgaggagact
 1381 ggaggcttcc aggaggcacc actggcctat gatgctatgt gggccttggc tttggccttg
 1441 aacaagacct ctggaggagg tggccgttca ggagtgcgcc tggaggactt taactacaac
 1501 aaccagacca ttacagacca aatctaccgg gccatgaact cctcctcctt tgagggtggt
 1561 tctggccacg tggctcttga tgccagcggc tcccggatgg catggacgct tatcgagcag
 1621 ctacagggcg gcagctacaa gaagatcggc tactacgaca gcaccaagga tgatctttcc
 1681 tgggtccaaaa cagacaagtg gatcgagggg tctccccag ccgaccagac cttggtcatc
 1741 aagacattcc gtttctgtc acagaaactc tttatctccg tctcagttct ctccagcctg
 1801 ggcattgttc ttgctgttgt ctgtctgtcc tttaacatct acaactccca cgctcgttat
 1861 atccagaatt cccagcccaa cctgaacaat ctgactgctg tgggctgctc actggcactg
 1921 gctgttgtct tccctctcgg gctggatggt taccacatag ggagaagcca gttcccgtt
 1981 gtctgccagg cccgcctttg gctcttgggc ttgggcttta gtctgggcta tggctctatg
 2041 ttcaccaaga tctggtgggt ccacacagtc ttcacgaaga aggaggagaa gaaggagtgg
 2101 aggaagaccc tagagccctg gaaactctat gccactgtgg gcctgctggt gggcatggat
 2161 gtcctgactc ttgccatctg gcagattgtg gaccccttgc accgaaccat tgagactttt
 2221 gccaaaggagg aaccaaagga agacatcgat gtctccattc tgccccagtt ggagcactgc
 2281 agctccaaga agatgaatac gtggcttggc attttctatg gttacaaggg gctgctgctg
 2341 ctgctgggaa tcttctgtc ttacgaaacc aagagcgtgt ccactgaaaa gatcaatgac
 2401 cacaggggcg tgggatggc tatctacaat gtcgcggtcc tgtgtctcat cactgctcct
 2461 gtgaccatga tctttccag tcagcaggac gcagccttg cctttgcctc tctggccatc
 2521 gtgttctctt cctacatcac tctggttgtg ctctttgtgc ccaagatgcg caggctgac
 2581 acccgagggg aatggcagtc tgaaacgcag gacaccatga aaacaggatc atccaccaac
 2641 aacaacgagg aagagaagtc ccgactgttg gagaaggaaa accgagaact ggaaaagatc
 2701 atcgtgaga aagaggagcg cgtctctgaa ctgcgccatc agctccagtc tcggcagcaa
 2761 ctccgctcac ggcgccacc cccaacacc ccagatccct ctgggggcct tcccagggga
 2821 ccctctgagc cccctgaccg gcttagctgt gatgggagtc gagtacattt gctttacaag
 2881 tga

FIG.15

APPROVED	O.G. FIG.
BY	CLASS SUBCLASS
DRAFTSMAN	

MLLLLLLLLFLRPLGAGGAQTPNVTSEGCQIIHPPWEGGIRYRGLIRDQVKAINFLPVDY
 EIEYVCRGEREVGPKVRKCLANGSWTDMDTSPRCVRICSKSYLTLENGKVFLTGGDLPA
 LDGARVDFRCDPDFHLVGSSRSICSQGQWSTPKPHCQVNRTPHSERRAVYIGALFPMSSG
 WPGGQACQPAVEMALEDVNSRRDILPDYELKLIHDSKCDPGQATKYL YELLYNDPIKII
 LMPGCSSVSTLVAEAARMWNLIVLSYGSSSPALSNRQRFPTFFRTHPSATLHNPTRVKLF
 EKWGWKKIATIQQTTEVFTSTLDDLEERVKEAGIEITFRQSFFSDPAVPVKNLKRQDARI
 IVGLFYETEARKVFCEVYKERLFGKKYVWFLIGWYADNWFKTYDPSINCTVEEMTEAVEG
 HITTEIVMLNPANTRSISNMTSQEFVEKLTKRLKRHEETGGFQEAPLAYDAIWALALAL
 NKTSGGGGRSGVRLEDFNYNNQITDQIYRAMNSSSFEGVSGHVVFASGSRMAWTLIEQ
 LQGGSYKKIGYYDSTKDDLWSKTDKWIGGSPPADQTLVIKTRFLSQKLFISVSVLSSL
 GIVLAVVCLSFNIYNHARYIQNSQPNLNNLTAVGCSLALAVVFPGLDGYHIGRSQFPF
 VCQARLWLLGLGFSLGYGSMFTKIWWVHTVFTKKEEKKEWRTLEPWKLYATVGLLVGMD
 VLTIAIWQIVDPLHRTIETFAKEPKEDIDVSILPQLEHCSSKKMNTWLGIFYGYKGLLL
 LLGIFLAYETKSVSTEKINDHRAVGMAIYNVAVLCLITAPVTMILSSQDAAFAFASLAI
 VFSSYITLVVLFVPKMRRLITRGEWQSETQDTMKTGSSTNNNEEEKSRLLKENRELEKI
 IAEKEERVSELRHQLQSRQQLRSRRHPPTPPDPSGGLPRGPSEPPDRLSCDGSRVHLLYK

FIG. 16

³⁵S **invitro** **transcription/translation**

[¹²⁵I]CCP71872 photoaffinity labelling

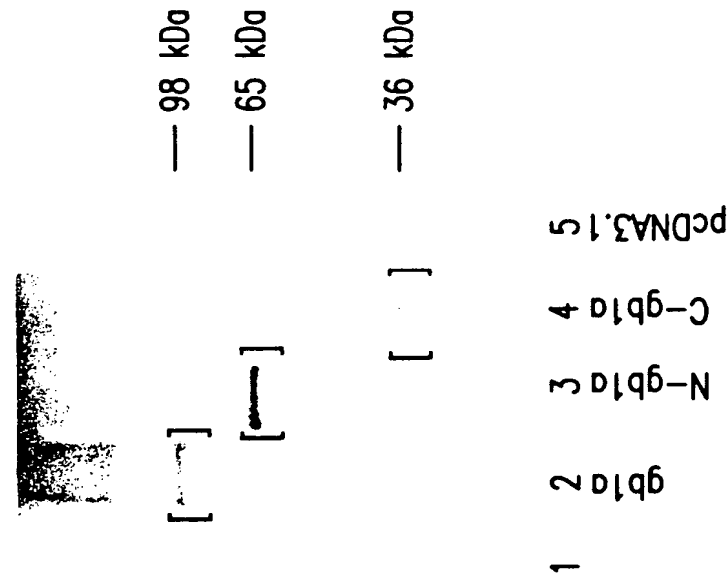


FIG. 17A

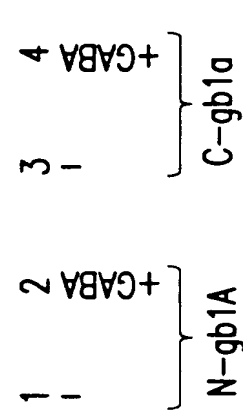


FIG. 17B

APPROVED	O.G. FIG.
	CLASS SUBCLASS
BY	DRAFTSMAN

MLLLLLLAPLFLRPPGAGGAHTPNATSEGCQIIHPPWEGGIRYRGLTRDQV
 KAINFLPVDYEIEYVCRGEREVVGPKVRKCLANGSWTDMTPSRCVRICS
 KSYLTLENGKVFLTGGDLPALD GARADFRCDPDFHLVGSSRSICSQGWST
 PKPHCQVNRTPHSERRAVYIGALFPMSSGGWPGGQACQPAVEMALEVNS
 RRDILPDYELKLIHHSKCDPGQATKYL YELLYNDPIKIIILMPGCSSVSTLV
 AEAARMWNLIVLSYGSSSPALSNRQRFPTFFRTHPSATLHNPTRVKLF EKW
 GWKKIATIQQTTEVFTSTLDDLEERVKEAGIEITFRQSFFSDPAVPVKNLKRQ
 DARIIVGLFYETEARKVFCEVYKERLFGKKYVWFLIGWYADNWFKIYDPS
 INCTVDEMTEAVEGHITTEIVMLNPANTRISISNMTSQEFVEKLT KRLKRHPE
 ETGGFQEAPLAYDAIWALALALNKTSGGGGRSGVRLEDFNYYNNQITDQI
 YRAMNSSFEGVSGHVVDASGSRMAWTLIEQLQGGSYKKIGYYDSTKDD
 LSWSKTDKWIGGSPPADQTLVIKTRFLSQKLFISVSVLSSLGIVLAVVCLSF
 NIYNHVRYIQNSQPNLNNLTAVGCSLALAAVFPLGLDGYHIGRNQFPFV
 CQARLWLLGLGFSLGYSMFTKIWWVHTVFTKKEEKKEWKRTLEPWKLY
 ATVGLLVGMDVLT LAIWQIVDPLHRTIETFAKEEPKEDIDVSILPQLEHCSS
 RKMNTWLGIFYGYKGLLLLLGIFLAYETKSVSTEKINDHRAVGMAIYNVA
 VLCLITAPVTMILSSQQDAAFASLAIVFSSYITLVVLFVPKMRRLITRGE
 WQSEAQDTMKTGSSTNNNEEEKSRLL EKENRELEKIIAEKEERVSELRHQLQ
 SRQQLRSRRHPPTPPEPSGGLPRGPPEPPDRLSCDGSRVHLLYK

FIG.18A

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

[illegible]

1	atgttgctgc	tgtgtact	ggcgccactc	ttctccgcc	ccccggcg	ggcgggcg
61	cataccccca	acgccacctc	agaagggtgc	cagatcatac	acccgccctg	ggaagggggc
121	atcaggtacc	ggggcctgac	tcgggaccag	gtgaaggcta	tcaacttcct	gccagtggac
181	tatgagattg	agtatgtgtg	ccggggggag	cgcgaggtgg	tggggcccaa	ggtccgcaag
241	tgcctggcca	acggctcctg	gacagatatg	gacacacca	gccgctgtgt	ccgaatctgc
301	tccaagtctt	atttgaccct	ggaaaatggg	aaggttttcc	tgacgggtgg	ggacctccca
361	gctctggacg	gagcccgggc	ggatttccgg	tgtgaccccg	acttccatct	ggtgggcagc
421	tcccggagca	tctgtagtca	gggccagtgg	agcaccccca	agccccactg	ccagggtgaat
481	cgaacgccac	actcagaacg	gcgcgcagtg	tacatcgggg	cactgtttcc	catgagcggg
541	ggctggccag	ggggccaggc	ctgccagccc	gcggtggaga	tggcgctgga	ggacgtgaat
601	agccgcaggg	acatcctgcc	ggactatgag	ctcaagctca	tccaccacga	cagcaagtgt
661	gatccaggcc	aagccacca	gtacctatat	gagctgctct	acaacgacct	tatcaagatc
721	atccttatgc	ctggctgcag	ctctgtctcc	acgtgggtgg	ctgaggctgc	taggatgtgg
781	aacctcattg	tgctttccta	tggctccagc	tcaccagccc	tgtcaaaccg	gcagcgtttc
841	cccactttct	tccgaacgca	cccatcagcc	acactccaca	accctacccg	cgtgaaactc
901	tttgaaaagt	ggggctggaa	gaagattgct	acatccagc	agaccactga	ggtcttccct
961	tcgactctgg	acgacctgga	ggaacgagtg	aaggaggctg	gaattgagat	tactttccgc
1021	cagagtttct	tctcagatcc	agctgtgccc	gtcaaaaacc	tgaagcgcca	ggatgcccg
1081	atcatcgtgg	gacttttcta	tgagactgaa	gcccggaaag	ttttttgtga	ggtgtacaag
1141	gagcgtctct	ttgggaagaa	gtacgtctgg	ttcctcattg	ggtggtatgc	tgacaatttg
1201	ttcaagatct	acgacccttc	tatcaactgc	acagtggatg	agatgactga	ggcgggtggg
1261	ggccacatca	caactgagat	tgtcatgctg	aatcctgcc	ataccgcgag	catttccaac
1321	atgacatccc	aggaatttgt	ggagaaacta	accaagcgac	tgaaaagaca	ccctgaggag
1381	acaggaggct	tccaggaggc	accgctggcc	tatgatgcca	tctgggcctt	ggcactggcc
1441	ctgaacaaga	catctggagg	aggcgccgt	tctggtgtgc	gcctggagga	cttcaactac
1501	aacaaccaga	ccattaccga	ccaaatctac	cgggcaatga	actcttcgtc	ctttgaggg
1561	gtctctggcc	atgtggtgtt	tgatgccagc	ggctctcgga	tggcatggac	gcttatcgag
1621	cagcttcagg	gtggcagcta	caagaagatt	ggctactatg	acagcaccaa	ggatgatctt
1681	tcctggtcca	aaacagataa	atggattgga	gggtccccc	cagctgacca	gacctgggtc
1741	atcaagacat	tccgcttcct	gtcacagaaa	ctctttatct	ccgtctcagt	tctctccagc
1801	ctgggcattg	tcctagctgt	tgtctgtctg	tcctttaaca	tctacaactc	acatgtccgt
1861	tatatccaga	actcacagcc	caacctgaac	aacctgactg	ctgtgggctg	ctcactggct
1921	ttagctgctg	tcttccccct	ggggctcgat	ggttaccaca	ttgggaggaa	ccagtttcc
1981	ttcgtctgcc	aggccgcct	ctggctcctg	ggcctgggct	ttagtctggg	ctacggttcc
2041	atgttcacca	agatttggtg	ggtccacacg	gtcttcacaa	agaagggaaga	aaagaaggag
2101	tggaggaaga	ctctggaacc	ctggaagctg	tatgccacag	tgggcctgct	ggtgggcag
2161	gatgtcctca	ctctcgccat	ctggcagatc	gtggaccctc	tgcaccggac	cattgagaca
2221	tttgccaagg	aggaacctaa	ggaagatatt	gacgtctcta	ttctgcccc	gctggagcat
2281	tgcagctcca	ggaagatgaa	tacatggctt	ggcattttct	atggttacia	ggggtgctg
2341	ctgctgctgg	gaatcttcc	tgcttatgag	accaagagtg	tgtccactga	gaagatcaat
2401	gatcaccggg	ctgtgggcat	ggctatctac	aatgtggcag	tcctgtgcct	catcactgct
2461	cctgtcacca	tgattctgtc	cagccagcag	gatgcagcct	ttgcctttgc	ctctcttgcc
2521	atagttttct	cctcctatat	cactcttggt	gtgctctttg	tgcccgaagat	gcgcaggctg
2581	atcacccgag	gggaatggca	gtcggaggcg	caggacacca	tgaagacagg	gtcatcgacc
2641	aacaacaacg	aggaggagaa	gtcccggctg	ttggagaagg	agaaccgtga	actggaaaag
2701	atcattgctg	agaaagagga	gcgtgtctct	gaactgcgcc	atcaactcca	gtctcggcag
2761	cagctccgct	cccggcgcca	cccaccgaca	cccccagaac	cctctggggg	cctgcccagg
2821	ggacccccctg	agccccccga	ccggcttagc	tgtgatggga	gtcagtgca	tttgctttat
2881	aagtga					

FIG. 18B

23/35

APPROVED	O.G. FIG.
	CLASS/SUBCLASS
BY	DRAFTSMAN

1 atgctgctgc tgctgctggc gccactcttc ctccgcccc cgggcgcggg cggggcgcag
 61 acccccaacg ccacctcaga aggttgccag atcatacacc cgccctggga agggggcatc
 121 aggtaccggg gcctgactcg ggaccagggt aaggctatca acttcctgcc agtggactat
 181 gagattgagt atgtgtgccg gggggagcgc gaggtgggtg ggcccaagggt ccgcaagtgc
 241 ctggccaacg gctcctggac agatatggac acaccagcc gctgtgtccg aatctgctcc
 301 aagtcttatt tgaccctgga aaatgggaag gttttcctga cgggtgggga cctcccagct
 361 ctggacggag cccgggtgga tttccggtgt gaccccgact tccatctggt gggcagctcc
 421 cggagcatct gtagtcaggg ccagtggagc accccaagc cccactgcca ggtgaatcga
 481 acgccacact cagaacggcg cgcagtgtac atcggggcac tgtttcccat gagcgggggc
 541 tggccagggg gccaggcctg ccagcccgcg gtggagatgg cgctggagga cgtgaatagc
 601 cgaggggaca tcctgccgga ctatgagctc aagctcatcc accacgacag caagtgtgat
 661 ccaggccaag ccaccaagta cctatatgag ctgctctaca acgaccctat caagatcatc
 721 cttatgcctg gctgcagctc tgtctccacg ctggtggctg aggtgctag gatgtggaac
 781 ctcatgtgct tttcctatgg ctccagctca ccagccctgt caaaccggca gcgtttcccc
 841 actttcttcc gaacgcaccc atcagccaca ctccacaacc ctaccgcgt gaaactcttt
 901 gaaaagtggg gctggaagaa gattgctacc atccagcaga ccactgaggt cttcacttcg
 961 actctggacg acctggagga acgagtgaag gaggtggaa ttgagattac tttccgccag
 1021 agtttcttct cagatccagc tgtgcccgtc aaaaacctga agcgcaggga tgcccgaatc
 1081 atcgtgggac ttttctatga gactgaagcc cggaaagtgt tttgtgaggt gtacaaggag
 1141 cgtctctttg ggaagaagta cgtctggttc ctcatgggtt ggtatgctga caattggttc
 1201 aagatctacg accttctat caactgcaca gtggatgaga tgactgaggc ggtggagggc
 1261 cacatcacaa ctgagattgt catgctgaat cctgccaata cccgcagcat ttccaacatg
 1321 acatcccagg aatttgtgga gaaactaacc aagcgactga aaagacaccc tgaggagaca
 1381 ggaggcttcc aggaggcacc gctggcctat gatgccatct gggccttggc actggccctg
 1441 aacaagacat ctggaggagg cggccgttct ggtgtgcgcc tggaggactt caactacaac
 1501 aaccagacca ttaccgacca aatctaccgg gcaatgaact cttcgtcctt tgagggtgtc
 1561 tctggccatg tgggtgttga tgccagcggc tctcgatgg catggacgct tatcgagcag
 1621 cctcagggtg gcagctacaa gaagattggc tactatgaca gcaccaagga tgatctttcc
 1681 tggtcacaaa cagataaatg gattggaggg tccccccag ctgaccagac cctggtcatc
 1741 aagacattcc gtttctgtc acagaaactc tttatctccg tctcagttct ctccagcctg
 1801 ggcattgtcc tagctgttgt ctgtctgtcc tttaacatct acaactcaca tgtccggtat
 1861 atccagaact cacagcccaa cctgaacaac ctgactgctg tgggtgctc actggcttta
 1921 gctgctgtct tccccctggg gctcgtggt taccacattg ggaggaaacca gtttctttc
 1981 gtctgccagg cncgcctctg gctcctgggc ctgggcttta gtctgggcta cgggtccatg
 2041 ttcaccaaga ttgggtgggt ccacacgggc ttcacaaaga aggaagaaaa gaaggagtgg
 2101 aggaagactc tggaaccctg gaagctgtat gccacagtgg gcctgctggt gggcatggat
 2161 gtcctcactc tcgccatctg gcagatcgtg gaccctctgc accggaccat tgagacattt
 2221 gccaaggagg aacctaagga agatatggac gtctctattc tgccccagct ggagcattgc
 2281 agctccagga agatgaatac atggcttggc attttctatg gttacaaggg gctgctgctg
 2341 ctgctgggaa tcttccttgc ttatgagacc aagagtgtgt ccactgagaa gatcaatgat
 2401 caccgggctg tgggcatggc tatctacaat gtggcagtc tgtgcctcat cactgctcct
 2461 gtcaccatga ttctgtccag ccagcaggat gcagcctttg cctttgcctc tcttgccata
 2521 gttttctcct cctatatcac tctgttgtg ctctttgtgc ccaagatgcg caggctgatc
 2581 acccgagggg aatggcagtc ggaggcgcag gacaccatga agacaggggt atcgaccaac
 2641 aacaacgagg aggagaagtc ccggctgttg gagaaggaga accgtgaact ggaaaagatc
 2701 attgctgaga aagaggagcg tgtctctgaa ctgcgccatc aactccagtc tcggcagcag
 2761 ctccgctccc ggcgccaccc accgacaccc ccagaaccct ctgggggcct gccagggga
 2821 cccctgagc ccccgaccg gcttagctgt gatgggagtc gagtgcattt gctttataag
 2881 tgagggtagg gtgaggagg acaggccagt agggggagg aaaggagag gggaaaggga
 2941 ggggactcag gaagcagggg gtcccatcc ccagctggga agaactgct atccaatctc
 3001 atctcttgta aatacatgtc cccctgtgag ttctgggctg atttgggtct ctcatacctc
 3061 tgggaaacag acctttttct ctcttactgc ttcattgta tttgtatcac ctcttcacaa

FIG.19A

APPROVED	O.G. FIG.
	CLASS/SUBCLASS
BY	DRAFTSMAN

```

3121 tttagttcgt acctggcttg aagctgctca ctgctcacac gctgcctcct cagcagcctc
3181 actgcatctt tctcttccca tgcaacaccc tcttctagtt accacggcaa cccctgcagc
3241 tctctgcctt ttgtgctctg ttctgtcca gcaggggtct cccaacaagt gctctttcca
3301 ccccaaaggg gcctctcctt ttctccactg tcataatctc tttccatctt acttgccctt
3361 ctatactttc tcacatgtgg ctccccctga attttgcttc ctttgggagc tcattctttt
3421 cgccaaggct cacatgtctc ttgcctctgc tctgtgcact cacgctcagc acacatgcat
3481 cctccccctc cctgcgtgtg cccactgaac atgctcatgt gtacacacgc ttttcccgta
3541 tgctttcttc atgttcagtc acatgtgctc tcgggtgccc tgcattcaca gctacgtgtg
3601 cccctctcat ggtcatgggt ctgcccttga gcgtgttttg gtaggcatgt gcaatttgtc
3661 tagcatgctg agtcatgtct ttctatttg cacacgtcca tgtttatcca tgtactttcc
3721 ctgtgtacce tccatgtacc ttgtgtactt tcttccctta aatcatggta ttcttctgac
3781 agagccatat gtaccctacc ctgcacattg ttatgcactt ttccccaatt catgtttggt
3841 ggggccatcc acaccctctc cttgtcacag aatctccatt tctgctcaga ttccccccat
3901 ctccattgca ttcatgtact accctcagtc tacactcaca atcatcttct cccaagactg
3961 ctcccttttg ttttgtgttt ttttgagggg aattaaggaa aaataagtgg gggcagggtt
4021 ggagagctgc ttccagtgga tagttgatga gaatcctgac caaaggaagg cacccttgac
4081 tgttgggata gacagatgga cctatggggg gggaggtggt gtccctttca cactgtggtg
4141 tctcttgggg aaggatctcc ccgaatctca ataaaccagt gaacagtgtg actcggaaaa
4201 aaaaaaaaaa aaaaaaaaaa

```

FIG.19B

APPROVED BY DRAFTSMAN	O.G. FIG.
	CLASS/SUBCLASS

PROXIMAL TO HSN-1. FCMD, DYS LOCI ON CHROMOSOME 9

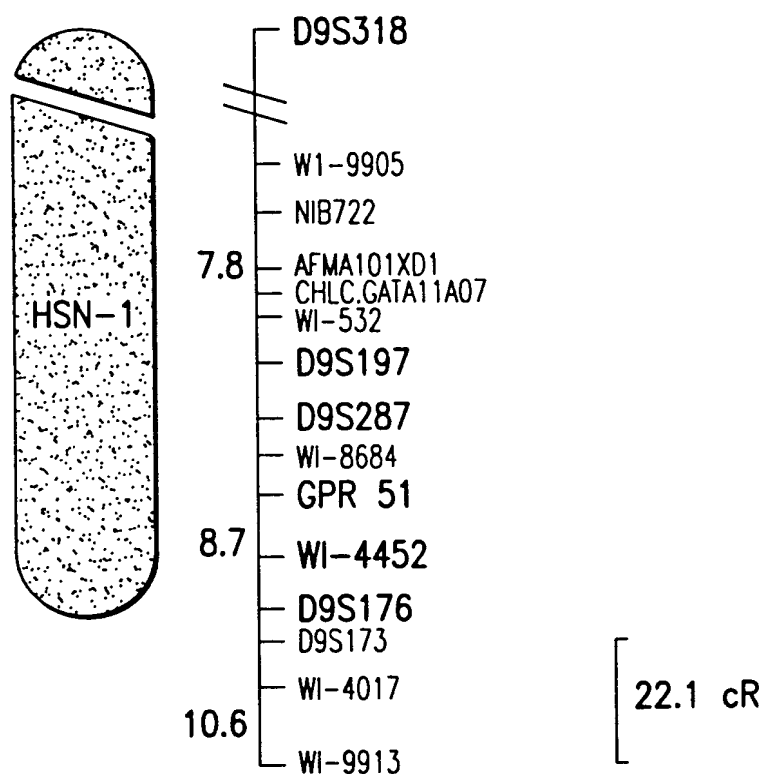


FIG. 20

APPROVED	O.G. FIG.
BY	CLASS/SUBCLASS
DRAFTSMAN	

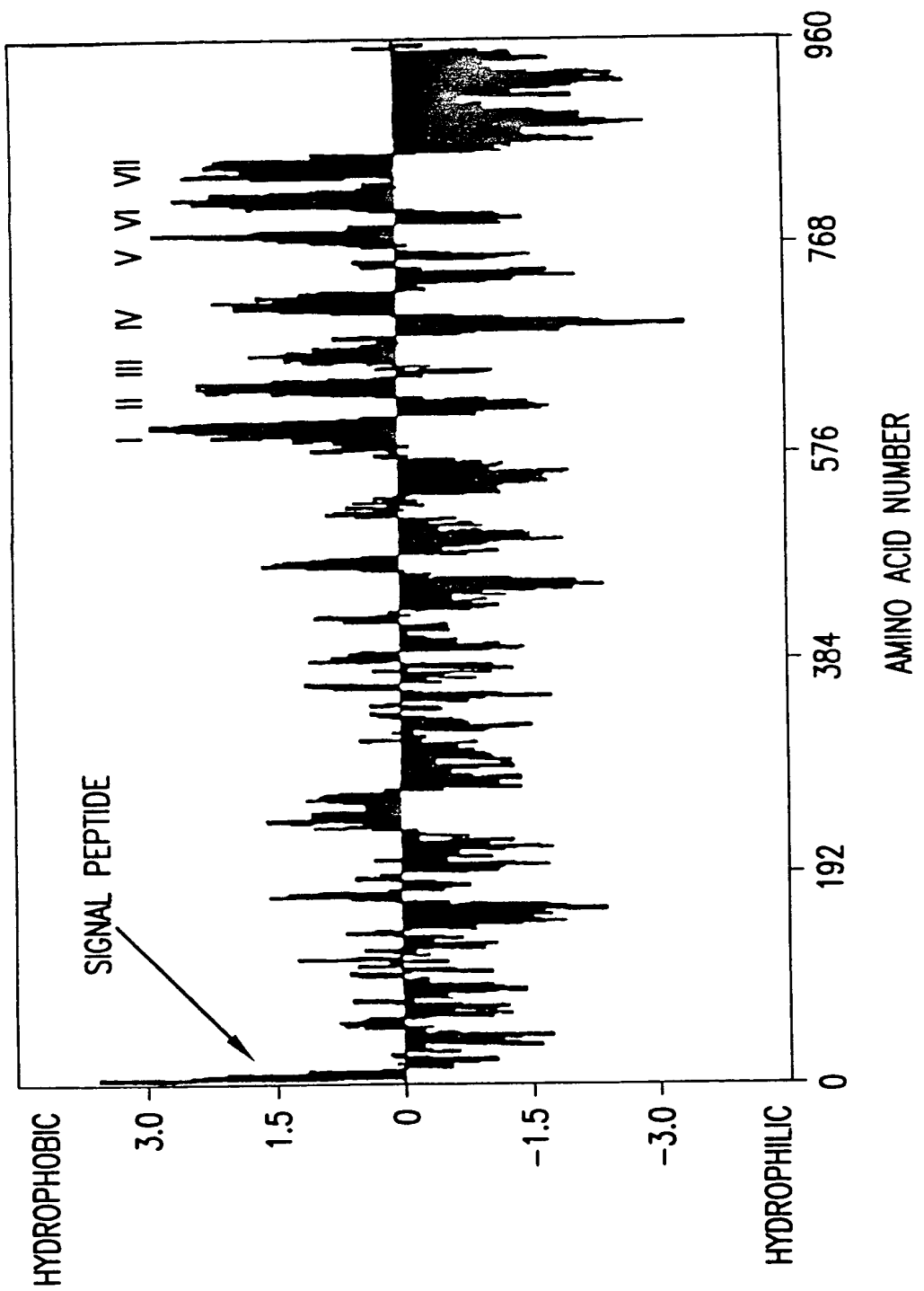


FIG.21

APPROVED	O.G. FIG.
BY	CLASS/SUBCLASS
DRAFTSMAN	

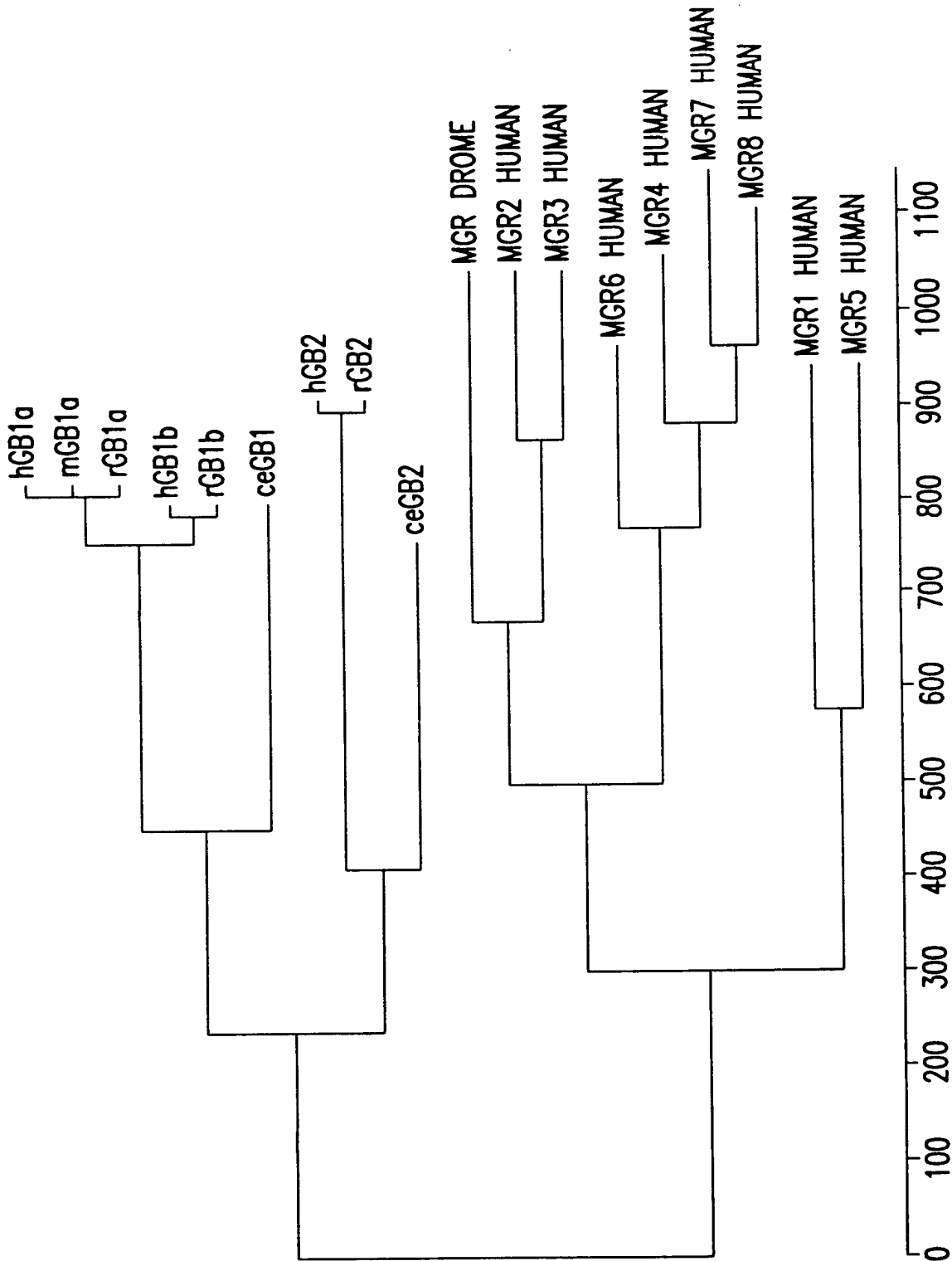


FIG. 22

COILED-COIL DOMAIN IN C-TERMINUS OF gb1a AND HG20
MEDIATING HETERODIMERIZATION

gb1WQSEA.QDTMKTCSTNNNEEK...SRLEK..ENRELEKIIAEKEERVSELRHQLQSRQQLRRRHPP
hg20 QNRRFQFTQNQKKEDSKTSTSVTSVNQASTSRLEGLQSENHRLRMKI TELDKDLEEVTMQLQDTPEKTTYIKQN

FIG.23

APPROVED	O.G. FIG.
BY	CLASS/SUBCLASS
DRAFTSMAN	

110 120 130 140 150 160 170 180 190 200 210 220
 ENCKVELTGGCDLPAIDGARDMDDFRCDDPDFHLVQSSRSICSSQWSTPKPHQVNRTPHSERRAVYICALFPMSCGWPGGACQPAVEMALIEDVNSRRDILPQYEDKLIHDSKQCEGQ
 ---MFVRSSWILQMGTIQWASAEPTLHQTFPMESG---SSGWAQCEACIPAVEMALIDVNSRDILPQYMNMTINHSQCPQL
 ---MNIFPRHGGIPPLGQVFTVQK---EGFPDALPAIRTALSHVHSRSCILGGYRLEMIKDTCKTSQ
 RLILLLLLPLLLPLAPCAWGWACAPRPDPSSPPLSIMG---LMPLTKEVAKSGIGRGVLPAVELAIETQIRNESLURPYFLDLRLYDTEQNAK

230 240 250 260 270 280 290 300 310 320 330 340
 A T K Y L E L Y N D P I K I I D M P G C S S V S L V A E A A R W N I M L S V G S S P A L S N R R F P I F E R T H P S A T L H N P I R V K L F E K W G K K I A T I Q Q T I E V F I S L D D L E E R V K E A C I E I T F R
 A M Q Q L Y D F L Y K P P I K I M L T G C S P M I T V I A E A P V N K I M L S V G S S P A L S N R R F P I F E R T H P S A N M O N P I R I H I M E K F K W K R F T I L M S V E E V F I T A K O L E N V S E R K K G I K V D R
 G M A L F D I I A S P P R P V A I I G G Q Q T E I M E P I T A N A K Y M Q I V Q L S V A E I T H A M N G Q L Q L F T I F F R W P G S R N T N M A K Q F V N F G M K R V G I M K Q D Q
 C I K A F Y D A I L I K Y C P N H L M V F G G V C P S M T S I I A E S L Q G M N L V Q L S F A A I T P V L A D K K K Y P Y F E R T I M P S O N A V N P A I L K L L K H Y Q M K R V G I L T D V Q P R F S E V R N D L T G V L Y G E D I E I S D T

[illegible]

450 460 470 480 490 500 510 520 530 540 550 560
 LTKRLKRHPETGGFEAPLAYDAIMWALALANITGGGGRGCGVRLDEYNNQTTQIYRAMNSSFEVSGHAMEDAGSGRMAMITIEQLGGSTYKICYDSTKIDLSMSK
 LTOYFQKOTANVGCFPEAPLAYDAMWALALANCTRRNNLPSHIRLENTTDDNKVKVADTLFCQVKNTSFRVSGKAMFESUGGRIARITQIEQGGGAKIMGYDITISGDEMYN
 AGDVWNEITQLDPNNITWRGAYDGLWTLALALSHSGD-----NAEFSHHKAMEAIDNSFCQLTGKMFANN-ERLGLVDIKQVSDGOWPFAVMDG--ADDEFK1
 YNNKPKSCVQDPSKELCYNNQCLIMWYIAKTIYRAMETIHASSRHORIDNFNYIDHTILGR|||NANNFTNFEQVITGQWFERNG-ERMCTIKFTQFQDSREMKVGEYNAVADTLEIIIN

FIG. 24A

570 580 590 600 610 620 630 640 650 660 670 680 690 700 710 720 730 740 750 760 770 780 790
 TMS-1 TMS-2 TMS-3
 TDWICG-SPPADQLVTKIFR-FLSOKLFI SVSVLSSGLVLA WCLSFNI YNSHVR YIQNSPNNLNL TAVGCSUJAAVFP LGLDGC--YHIGRNCFFVQOARLWLLGLGFSLGL
 KEQMLNGKGPDP-STVIKTEN-SYSDFLIFSSITLDQVFSQFLAL LHVSSFIFLHKNIIFQ-SQPECNILLIGCSLQDFSLFLIGLPSDDISITSESLFPLQCHAVMTILQFCGTFIFA
 IDSTTKGWSPLD-STITERPREHTSSILFLAWSILALIGIFLALIFLLINFRVNRHFIKMSSPNNLNIITAGSICIFASVIMLGLDT--RIIVSPDVFVMLCYTKTWILCIGFILLS
 DTIRFCSEPPKDKTILILEQLR-KILSLPLYSLISALITILGMINIMASAFLLFNIKRNOKLIKMSSPYNNLILILGGMLSYASIFLFGLDG--SFVSEKITEELQTVRTWILTVGTYITA

YGSMTFKIIMVHTVF TKEEKKEWK TLEPWQIATVGLVGMQVLTALIMQIVDPLHRTIETFAKEEPEKEDIDVSILPOLHQSRRKMNITWLGJFYGYKGLLLLGIFLAYETKSV
YGSMTFAKMIIVHRMGATENOOLASRQPISSSKFYVIAAALTAVDVFVCFVWVLIDPLHTEQKPLFADSEDEEMIMVJQQQSNQOEVMIGIMCFKOLLVFGTFLSYETRLNL
FGAMFSK TWRVHSIF TN --- IIRDRKAITKOSKLF IILGLILFIDIQMVTMAFVST SYTVEQFKFLIFSARANIIMTIPLEVEKONSSFGVQAVLYAMKGMIMLGGCF LAWETRM
FGAMFAK TWRVHAIFKN --- VKMKKIIIKDQKLLVJYCGMLIDLCILICMQAVDPLRRTVEKYSMEPDAGDIIISUPPLEHCHENTAMITWLGIYVAYKGLMLFGCF LAWETRM

800 810 820 830 840 850 860 870 880 890

STEK[ND]RAVGMALYNVAVLCLITAPVTIMLSS-QQDAAF AFASLA-IVFSSYLTLWLFVPMRLITRGEWQS---EADDTMKTQSSSTNNNEEEKSRLLLEKENR

KLRF[ND]SRFVGLATYNVAVMTLITAPWTLQIHGKVDANFAEISLTSVLICITLISVGLIYGPRIHIIKVPSPAD---EIQLNGNMVCPGVMSKVDDK---

NVPALNDSKYIGTSVYCCVMSVGLSTSVILQE-RVNEFSLASFF-VIFSTITLTLCLFVVPKVRFLCLCCIGS---

SIPALNDSKYIGMSVYNVGIMCIIGAAVSFLTRD-OPNVQECIVALV-IIECSITLTLCLFVVPKLITLRTNPDAATQNRRFQFTQNKQKEDSKTSTSVTSVNDQASTSRLEGLQSENH

900 910 920 930 940 950 960
ELEKI IAEKEERVSEDRHQLQSRQQLRSRRHPTTPEPSGGLPRG-----PPEPPDRLSCDGSRVHLLYK-
-----RYDMKKKE-----

RI RMKI TEI DKOLFEVTMQLDTPKTTYIKONHYQELNDILNLGNFTESDGGKAILKNHLDQNPQLQWNTEPRTCKDPDIEDINSPEHIQRRLSLQLPILHHAYLPSIGGVDA

APPROVED	O.G. FIG.
BY	CLASS SUBCLASS
DRAFTSMAN	

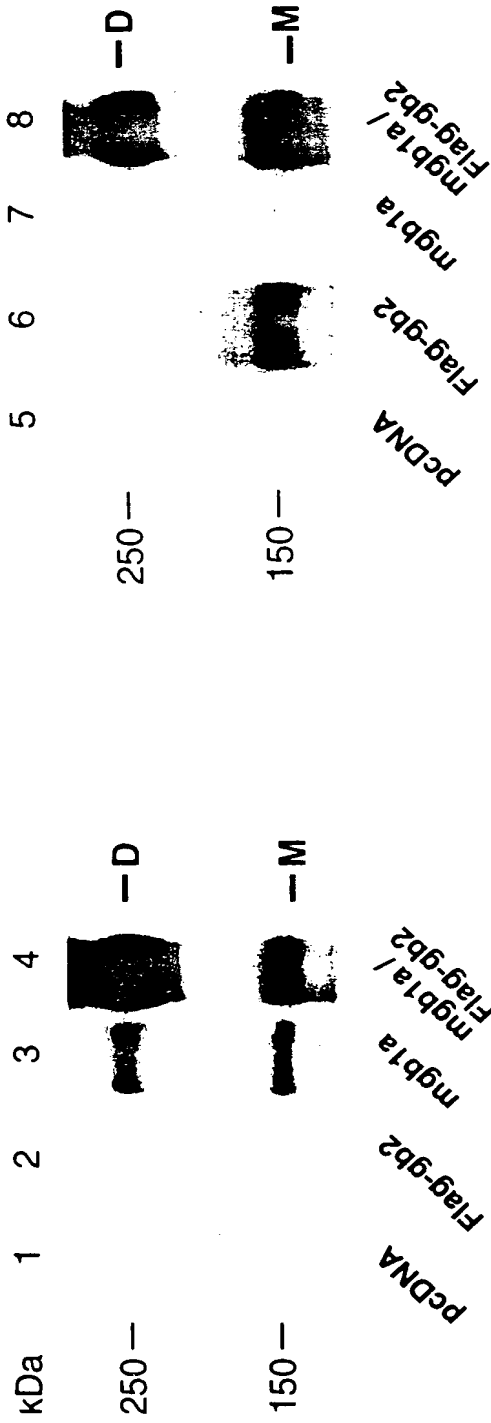


FIG. 25A

FIG. 25B

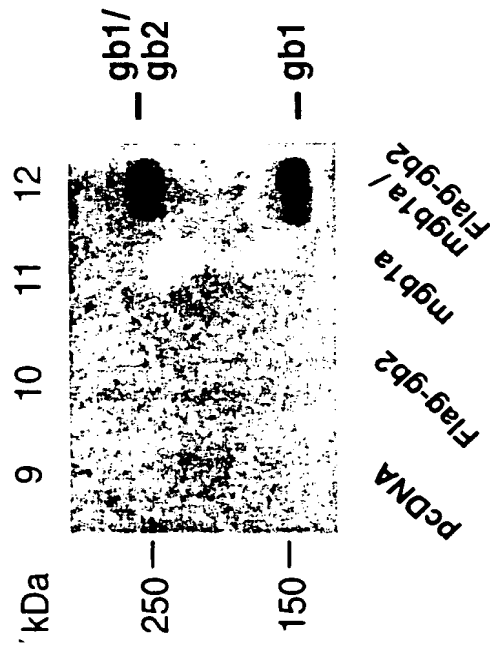


FIG. 25C

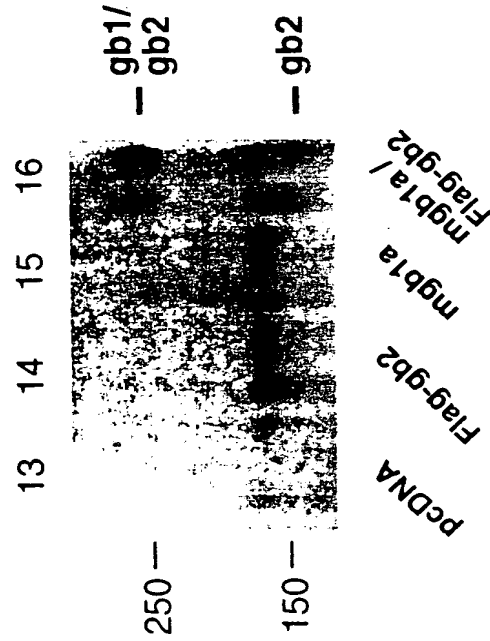


FIG. 25D

APPROVED	O.G. FIG.
BY	CLASS SUBCLASS
DRAFTSMAN	

mCABab1a MLLLLLLL LFLRPLCAGGAGTNPVTSECCQI IHPMEGG IRYRGL IRDQVKA INFLPVDYE IEYVCRGERE WGPVKVRKCLANGSWTMDTPSRCVR ICSSYML TLENGKVFL TCGDLP: 119
 hCABab1a MLLLLLLL LFLRPLCAGGAGTNPVTSECCQI IHPMEGG IRYRGL IRDQVKA INFLPVDYE IEYVCRGERE WGPVKVRKCLANGSWTMDTPSRCVR ICSSYML TLENGKVFL TCGDLP: 120
 hCABab2 M..... AS..... PRRS..... QPCRPPPPPP..... PPAR..... LLL..... LLL..... LP: 30
 mGluR1 MGLLLFFFAIF LEVS..... LLPRSPOR..... HTAMADDI.....
 LivK MKRNAKTIIAGMIALAIS..... EDI.....
 LivBP

mCABab1a ALDCARVDFRCDDPDLH VGSSRS ICSSQWSTPKPHCQVNRTPHSERRAVY IGA LFPM S... GGMPG... GOACOPAVEMALEDNNSRRD... ILPDYELKL IHHD... SKDPGQAATKYL YELLY: 233
 hCABab1a ALDCARVDFRCDDPDLH VGSSRS ICSSQWSTPKPHCQVNRTPHSERRAVY IGA LFPM S... GGMPG... GOACOPAVEMALEDNNSRRD... ILPDYELKL IHHD... SKDPGQAATKYL YELLY: 23
 hCABab2 LL..... LPLAPCAGCWA..... RCAPRP..... PPSSP... PLSIMGLMPLTKEVAKGSI GRGVLPAVELATEQI... RNESSLRPYFLDLRLYO... TECNAKGLKAFYDAIK: 12
 mGluR1 VITICALFSVHHQHPAEKVPERKCGE IREQYGIQR..... VEAMFHTLDKINADPVL PNITLGSE... IRD... SCHSSVALEOSIEF IRDSL ISIRDEKGI... NRCLP: 142
 LivK VVGAM..... SCPI AQNCIME..... FNGAEQA IKDINAKGIGDKLVGVE... YDD AC... DPKQAVAVANK IVN: 90
 LivBP VVGAM..... SCPV AQYCDQE... FTCAEQAVADINAKGIGKNGKLOIAK... YDD AC... DPKQAVAVANK VVN: 67

mCABab1a ND..... PIKIIILMPG CSSSVSTL VAE AARMN... LIVLSYSSSPALSNRORFPFIFRTH PSATILHNPTRVK LFE... KNGWKKIAT IQQTTEVFTS... TDDLEERVKEAGI: 33
 hCABab1a ND..... PIKIIILMPG CSSSVSTL VAE AARMN... LIVLSYSSSPALSNRORFPFIFRTH PSATILHNPTRVK LFE... KNGWKKIAT IQQTTEVFTS... TDDLEERVKEAGI: 335
 hCABab2 YG..... PNHLMVFGVPSVTSIAESLOGWN... LVOLSFATITPMLADKKKIPYFFRTPMSONAVNPATILK LK... HYQWKRVGTL TQDVQRFSE... VRNDLTGVL YGEDI: 224
 mGluR1 DQCSLPPGRTKKP IAGVI QPCSSVAIQVONLLQFLD... IPQIAYSATS IDLSDKTLKYELRVVPSDTLQ... ARAMD IVKRYNMITYVS AV... HTEGNYGEGSGMDAFKELAAQEG: 253
 LivK IKYVI CHLCSS STOPAS... DIYEDEGILMISPGATAPELTORG... YOHIMRTAGLDSOQPTAAKYTILETVKP QR... IAITI HDKQOYGE CLAR... SVQOQL: 185
 LivBP IKYVI CHLCSS STOPAS... DIYEDEGILMITPATAPELTARG... YQLILRTIGLDSOQPTAAKYTILETVKP QR... IAITV HDKQOYGE CLAR... AVQOQL: 162

FIG. 26A-1

APPROVED	C.G. FIG.
BY	CLASS SUBCLASS
DRAFTSMAN	

mGABab1a EITITRUSFFSDPAPVKN...LKRODARI...INCLFYET...EARKVCEVYKERLFGKYYWMLIGWYADNMFK...TYDPSINCTVEEM.TEAVEGHITTE...IVMLNP:431
 hGABab1a EITITRUSFFSDPAPVKN...LKRODARI...INCLFYET...EARKVCEVYKERLFGKYYWMLIGWYADNMFK...IYDPSINCTVDEM.TEAVEGHITTE...IVMLNP:432
 hGABab2 EISDTEFSNDPCTSVK...LKGNVRI...ILGQFDON...MAKVCCAYEENMTCYQWITPQWYEPSWIEQ...VHTEANSSRCLRKNL.LAMEGYIGVD...FEPLSS:324
 mG1uR1 CJAHSOKIYSN...AGEKSFDRLLPKLRERLPKARVVQCEGM.TVRGLLSAM...RRLGVGEFSLIG.SDGWADRODEVIEGYEVEANGGIT.IKLQSPFVRSFDDYFLKRLDIN:362
 LivK KANANVFFDGTAGEKOFSAI...ARLKKENIDFVYGGYYPFEMGMLROA...RSVGLKTOF.MG.PEG...V.GNASLSNIAGDAWEG...M.LVTM:271
 LivBP KKGANVFFDGTAGEKOFSTLV...ARLKKENIDFVYGGYYPFEMGQILROA...RAAGLKTOF.MG.PEG...V.ANVLSNIAGESAEG...L.LVTK:248

mGABab1a ANTRISNMTSOEFVEKLTkRLKRHE...ETGCF...CEAPLAYD...AIMALALALINK...TSGGGRSGVRLEDNYYNQITTDQIYRAMSSSFEVSGHW.FDASSRMA:534
 hGABab1a ANTRISNMTSOEFVEKLTkRLKRHE...ETGCF...CEAPLAYD...AIMALALALINK...TSGGGRSGVRLEDNYYNQITTDQIYRAMSSSFEVSGHW.FDASSRMA:535
 hGABab2 KQIKTISGKTPQYEREYNN.KRSGV...GPSKF...HG.YAYD.GIMVIAKILORAMETLHASSRHQ.RIQDNYTDHTLGRILNANETNFFCVITQW.FR.NCERMG:424
 mG1uR1 TRNPWFPEFWQHRFOCRLPCHLENPNFKRICTGNESLEENYVQSKMGFVINAIJMAHGLQ.NMHALCPGHVGL.CDAMKPID...CSKLLDFLIKSSFEVSGHEWFEKQDAPG:477
 LivK PK...RYD...ODPANQIV...DALKAD.KKOPSCBY.WITTYAAVQSLATALERTGSDEPLAL.VKDLKANG...ANTVIGPLN...WDEKQDLK:351
 LivBP PK...NYD...QVPANKPIV...DAIKAK.KOPSCAFV.WTYYAALQSLQAGLNQ.SDDPAEI.AKYLKANS.VDTWMCPLT...WDEKQDLK:326

mGABab1a WTL.IE...QLQGSYKKIGYYD...STKDDLS.WSKTDKWIGCS...PPAD...:575
 hGABab1a WTL.IE...QLQGSYKKIGYYD...STKDDLS.WSKTDKWIGCS...PPA...:575
 hGABab2 TIKFT...QFQDSREVKVEYN...AVADILEIINDTIRFQCE...PPKQITILEQLR...:475
 mG1uR1 RYDIMNLQYTEANRYDYHVHTWHEGVNLNIDDYKIQMKSGVRSVCSPOKQIKVIRKGEVSCCWICJACKENEYVQDEFTCKACDLGWPPNADLTGCEPIPVRY:585
 LivK FDF...GVFQ...WHADCS...STAWK...:369
 LivBP FEF...GVFD...WHANGT...ATDAK...:344

33/35

FIG.26A-2

34/35

APPROVED	O.G. FIG.
BY	CLASS/SUBCLASS
DRAFTSMAN	

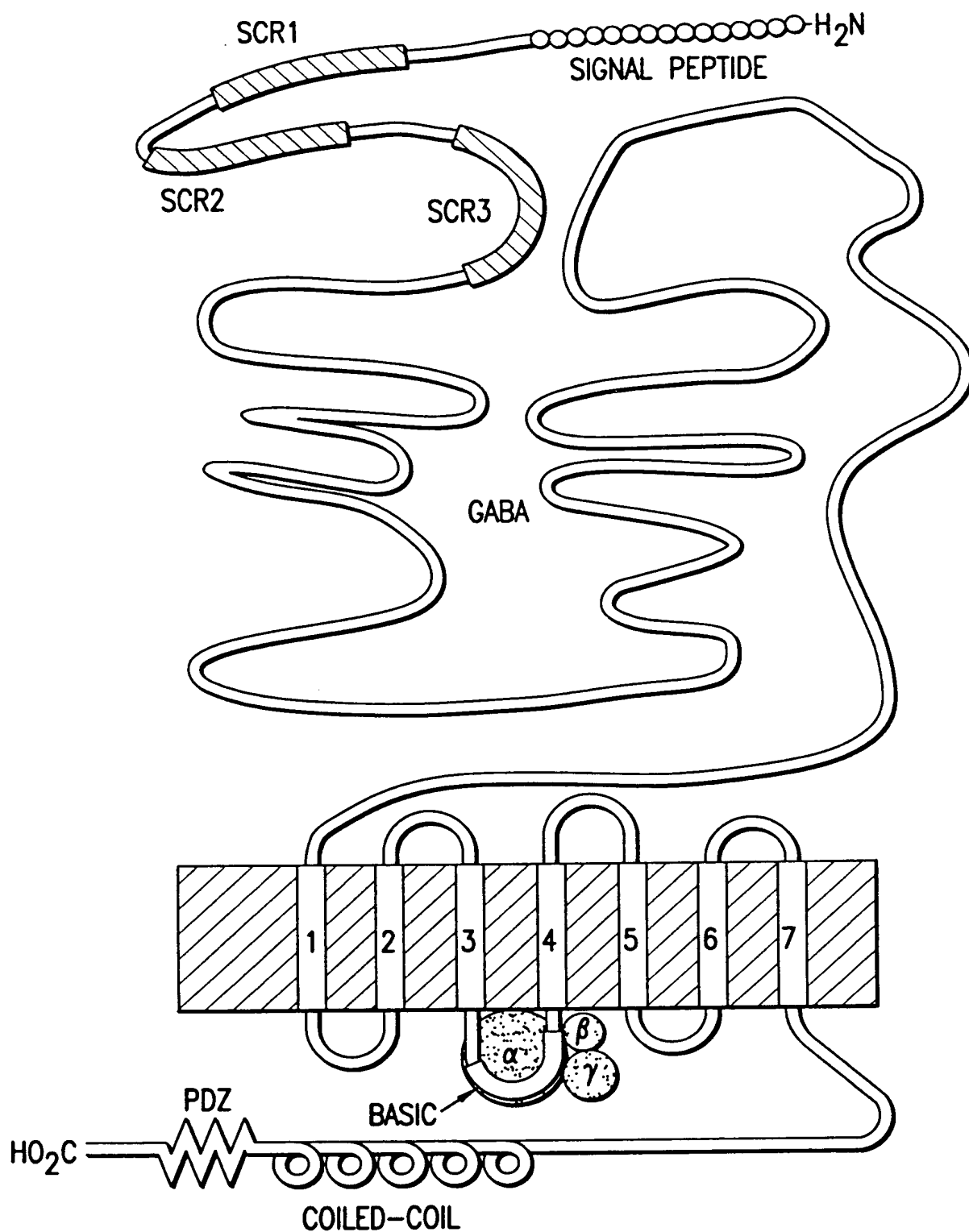


FIG.26B

APPROVED	O.G. FIG.
BY	CLASS/SUBCLASS
DRAFTSMAN	

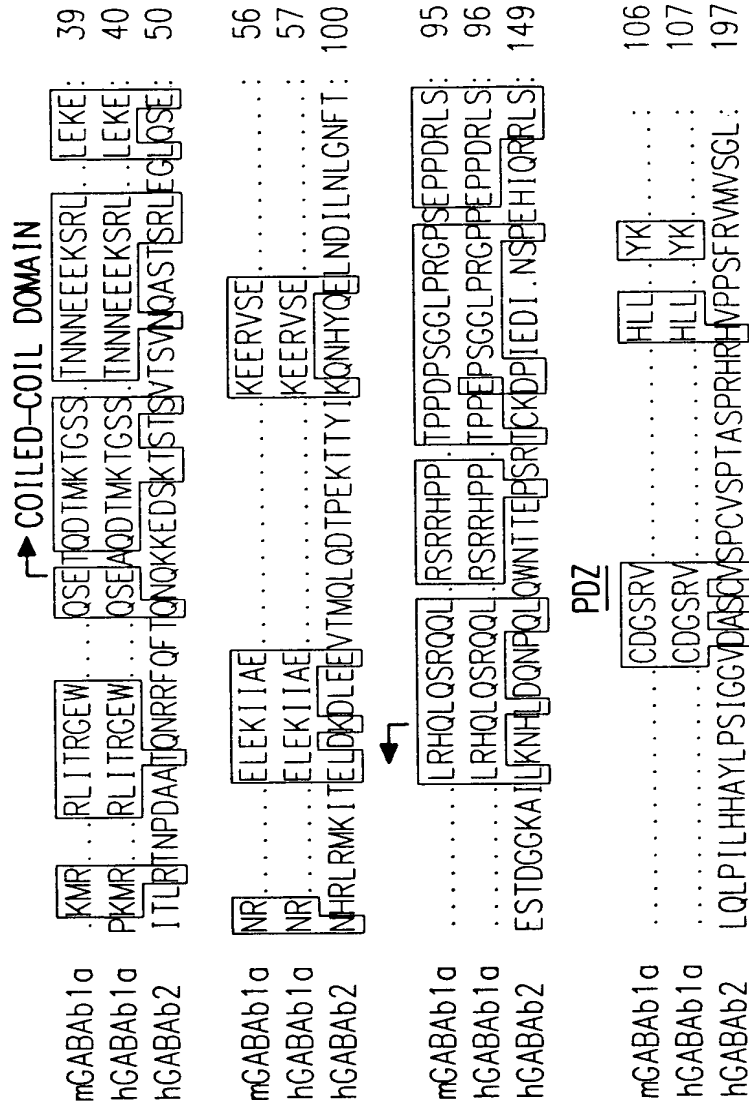


FIG.27